

THE BRICKBUILDER.

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A PALACE IN ERIJA, SPAIN.

THE BRICKBUILDER

VOL. 14 No. 10 DEVOTED TO THE INTERESTS OF ARCHITECTURE IN MATERIALS OF CLAY OCTOBER 1905

THE BRICKBUILDER.

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ECCLESIASTICAL ARCHITECTURE.

IN the discussion as to the influence upon church architecture of the somewhat novel conditions of modern times there is naturally great variety of opinion caused by an equal variety of individual or of denominational sentiment. The stronger the tradition of the ritual and the more established the forms of worship, the more nearly will the architecture resemble precedent and be imitative of tradition both in the plan and in the expression of the exterior. Association with the past is not merely confined to religious observance and to heredity of belief and of aspiration, but must of necessity appear in the material expression of the spiritual desire. And as naturally as a plant grows does the Church express itself to-day through the same fundamental means that it has in the past. Dignity of form and space, amplitude of protection, beauty inherent to the highest imaginative conceptions belong preëminently to the Church, and it matters little whether the style be Classic or Gothic if it has these elements of nobility. Propinquity alone causes local change of expression. It was inevitable that the Church in Italy should be affected by the power of Classic art, as it was equally inevitable that in lands without a Classic environment the art of the Gothic should develop from structural factors alone. But in every case where buildings have worthily enshrined religion the noblest and simplest of construction has alone seemed adequate and permanent, and mere utility has been manifestly inexpressive of the desire of man to worship. This is equally true of all religions, Pagan, Buddhist, Mohammedan and Christian. The temple did not live by the mere bread of utilitarian structure alone, but that structure was ennobled in form, in material and in detail.

Corresponding conditions create corresponding expression, at least in all essentials, and religions, which are based upon the noblest aspirations of man, long ago discovered the material means of expressing man's aspirations, and will scarcely depart from them.

Unfortunately a very large percentage of ecclesiastical buildings in America have been designed by men who no more deserved the name of architects than they did of archangels, men who are known by their work, which is crude, malproportioned, without evidence of knowledge of the rudimentary forms of either construction or of ornament. There is a sincere and undoubtedly just complaint made that many of these men have not even business probity. In architecture as in no other profession does the malpractitioner injure the good name of the profession. In law and in medicine, in music and in literature, and in painting and sculpture the work of the incompetent and of the unprincipled passes and leaves but little mark. Dead men tell no tales, but a building erected by an architect stands for years, conspicuous, seen perforce of its existence, either a thing of beauty, of delight, glorified by dawn and by the blaze of noonday, or ugly, sordid, mean, flaunting its poverty of thought; or, worse still, monstrous, an oppression, a permanent disgrace.

The amount necessary to its erection only aggravates the enormity of its offence. It has been asked why the architects themselves do not attempt to protect the clients from the charlatans of their profession. They do. The American Institute of Architects is established for that purpose. It requires that its members shall either have graduated from an accredited school of architecture, or that they shall pass an examination which is sufficient to prove their capacity, that they shall not be associated in any way with manufacture of materials or objects which are used in buildings or in the buying or selling of the same, and naturally that their fees from their clients shall be their only emoluments from the practice of their profession.

There is a need of better church architecture throughout the country, and the lack of it at present is certainly not due to the lack of men of talent, for there are ecclesiastical buildings occasionally erected which give evidence of the skill and ability of the architects. The difficulty must therefore lie in the judicious choice of the architects by the clergy; and it is through the application by the clergy of a similar discrimination to that which they exercise upon other problems, that the best men in the architectural profession may be employed to erect churches which shall be worthy to enshrine religious observances.

Ecclesiastical Architecture.

THE CATHOLIC CHURCH.

PAPER II.

BY REV. JAMES J. FLOOD.

IN this discussion of ways and means the main point seems to be concerned with the style of church which the taste and the necessities of the average congregation will demand in the new era that has just opened. One may theorize to any extent on the question, but the practical thing is to examine with care what the clergy and the people and the architects have been doing in the past, and then to discover what new ideals have entered into their lives, and finally to study the new conditions in which all find themselves at the commencement of the twentieth century. It is upon these lines that I shall endeavor to contribute something worth while to the discussion. It is a good thing that the subject of church building should be taken up in this fashion, for we all need to know more about it than we do, both on the practical and the theoretical side. The architect needs to know the ideals and needs and wishes of his patrons, and the clergy should know enough of architects to be able to pick out one with conscience and real skill as well as reputation. So far as I have observed the architect with a reputation, not for science or success, but for audacious push, has almost monopolized ecclesiastical architecture; and when his deficiencies were discovered some obscure incompetent with the same amount of brass in his make-up took his place. The exceptions to this general statement are quite numerous, and as it is only a matter of my experience it need not be taken too seriously.

The first thing to consider, in the effort to throw some light on the future, is the work that has been done in church building for the past fifty years. The earliest effort of course was to find space for the people to assemble for worship, and the churches of the first days were mostly remarkable for that qualification. We may pass them by. They did what was required of them, and many of them exist yet, pleasant memorials of the beautiful faith of the past. When people had more money and more leisure they built more elaborately, and from the close of the Civil War until the present moment a large number of characteristic churches have been built at great expense and with some success architecturally. The strongest features in their externals are the high walls and the steeples. There is not much variety in the style of the first twenty years, which is regularly some modification of Gothic. More variety and freedom appear later on. The best churches were built of stone, the second best of brick, and all the rest of wood; but their common feature was the lofty wall and the steeple or tower. The conclusion is irresistible that the common idea of the church was then connected with the idea of mass. This statement is borne out by an examination of the more expensive churches. The more money the priest and people had the more solid material they put into their buildings, without regard to the particular need for a great quantity. I have seen churches with towers containing enough brick to build a respectable church for the congregation, and with enough unnecessary brick in the walls to build a second church.

It may therefore be taken for granted that the churches of the future will be built generally in a similar fashion, with such modifications as the new circumstances require; and that the Gothic, the Romanesque and even the Byzantine will be the prevailing styles, because of their adaptability in carrying out the idea of massiveness. In London they are just bringing to completion the new Westminster cathedral, a remarkable and handsome building of the Byzantine style; and this adoption of the Eastern style will be sure to have a wide and overwhelming influence upon the clergy and the people all over the world. Moreover, the Catholic priests and people of America are doing more traveling in Europe than ever before, and are bringing back ideas and some ideals from Europe and the East. Some results of this are seen in the building of a cathedral in Montreal on the model of St. Peter's in Rome; of churches in various towns on the model of the church at Lourdes; together with many imitations of the better known shrines of Europe. Even the poorest Catholic churches make the attempt to reach the massive, and to secure high walls and a tower. The low-walled churches are very few indeed, and there is no reason to expect that they will ever be as popular with Catholics as they have deservedly been with the Protestants. I may conclude this part of my article with the remark that in the future, as in the past, Catholic churches will be massive, and will adopt that style of architecture which handles the massive with ease and distinction. And of course decoration will be on the same scale, in the shape of rich colors and large windows in the Munich and perhaps the English coloring.

The conditions of church building are very much changed however, and the social and financial conditions, not to say the intellectual, of Catholics have improved. It will be necessary therefore to glance at these changed conditions in order to understand how they will modify the last statement in the paragraph above. The general improvement in the Catholic body, more money, more leisure, more culture, means that there will be considerable variety, far more elegance, and better taste shown in the churches. This statement will find illustration at any moment in the churches which have just been completed all over the land. There is no need to dwell upon this point further. The other conditions to which I have alluded may be looked upon as limiting the situation. First of all we have the changed conditions of life in the city and the country. Neither is what it was thirty years ago. Then the people lived over a broader area, scattered through villages, towns and small cities, each of which had a lively, independent life of its own; and the few great cities were only country cities of larger growth, where air space and land space were plentiful, and prices were fairly reasonable. As we know, all that has been changed, for the worse perhaps, and the changes are still going on. The population is being centralized. The great cities draw all things to themselves, prices are high, land is impossibly dear, air space is dear, and land space has disappeared. What remains in the country passes through a similar process. One town absorbs all its neighbors by securing their trade. It would seem that the smaller towns and villages must die out. They have already lost their business, the trolley having carried it to the greater town.

The consequences in such a city as New York, which is of course a case by itself, are very marked. In the first place land is so high in price, and so difficult to secure in the needed situations, that the first debt incurred in the erection of a church terrifies the priest and his congregation. The limits of a parish are fixed, and the church must be convenient to the boundaries. The space from which the ground is to be selected is therefore rather limited. The corners of streets are the desirable places for churches, but the prices or some other obstacle force the selection of a site in the middle of the block. The lot on which the church is to be built is rarely more than one hundred feet in width. On either side the walls of rectory and school close in upon the church structure; or, as is sometimes the case, the walls of secular buildings, the rectory and school happening to be on the next street. The architectural opportunity is thus destroyed, because to such a church there can be nothing but the façade and interior. It would be manifestly ridiculous to erect in such a place a Gothic, Romanesque or Byzantine monument, although in a few cases the thing has been done. It is in a problem of this kind that both priest and architect forget the rules of art and common sense sometimes. What is needed in a church so situated is simply the fine façade and beautiful interior, planned according to the requirements. Towers and steeples are unnecessary expense, and add nothing to the general effect because they cannot be seen. Even where the church stands on a corner or fronting a public square the conditions will not permit of the ordinary style of church. A good illustration is afforded in the fate that overtook the pretty church in which Rev. Mr. Parkhurst officiates on Madison Square in New York City. It is a simple Gothic edifice with a graceful tower and spire. Some one built a sky-scraper beside it and made it look like a child's toy from any point of view. As lofty buildings are certain to be the rule in all the populous cities of this century, one may see that nothing less than an entire block would suffice in order to secure for a handsome church the proper perspective. Closed in on all sides and dominated by the taller buildings, the ordinary church of the past is lost to sight. This fact has so impressed some architects that they are suggesting the use of the upper stories in the sky-scrapers for church purposes, closing the great building with a regularly formed church, to which elevators will carry the congregation. There is nothing absurd in this suggestion.

The point I wish to make is this: with the weight of population in the great cities and large towns, and the consequent change in conditions, the architect must suggest church buildings suited to the new circumstances. I have not stated all the conditions, because it would not be possible within the limits of this article. Let me mention the more obvious. The population of a city parish is usually large. While New York is always to be considered exceptional, yet if we take its conditions for a working example a fair idea can be got of what will be the rule in all large towns. There are from five to seven public services held in our city churches every Sunday morning, and at each Mass the church is crowded or comfortably full. Within the space of an hour the congregation must enter the church, be seated, go through the services and leave the church to make way for the

next gathering. From a quarter to six until nearly one o'clock, therefore, the church is in active service. During the Mass great numbers of people go to Holy Communion. From the altar or the pulpit the priest makes the parish announcements, reads a portion of the Gospel and preaches a very short sermon. From these details the trained and experienced architect will draw his conclusions rapidly. First of all the means of entrance and exit must be commodious and speedy; therefore wide doors and capacious vestibule and aisles. The people go to communion by hundreds; therefore easy approach to the sanctuary rail and easy use of the space before the sanctuary. The parish announcements and the sermon must be heard; therefore good acoustics and proper place for the pulpit, or elevation for the altar platform. From three to ten thousand people attend during the entire morning; therefore light and ventilation of the greatest efficiency. There are innumerable difficulties connected with all these points, and some of them are too easily overlooked.

It is easy to see how large must be the modification in the general idea mentioned in the first part of this article, that of the massive. As far as the exterior of the city church is concerned the idea of the massive altogether disappears. Its place, however, will be taken by large outlines in the façade and a lofty interior, for the church builders are certain to spend on an imposing façade and beautiful decoration what may be saved by dispensing with domes and towers. In the country districts the general ideas will prevail, modified by the lack of means, when the greater part of the population is in the towns. The next question which offers itself to the architect in this matter of modification is the offence likely to be given to tradition by a radical departure from the old fashions. I think there should not be any breaking with the ancient standards, and there will not be, for the reason that the change will never be popular. Modification to suit new circumstances need not be destruction. I read somewhere lately from an experienced architect a plea for the new architecture suited to the new conditions which have been described above. He advocated radical changes in the direction of the new needs, such as would produce a new form of church architecture. In my opinion he is making a mistake as far as Catholics are concerned.

With Catholics the traditional, both in doctrine and in rubrics, has a sanctity beyond the comprehension of their Protestant brethren. It is instinctive as well as formal. Even where we lay an old custom aside for a new and better one, this is done with regret and with tender remembrance; and if possible the old custom is worked into or in with the new. Thus in the use of lights, the invention of the incandescent light, while sanctioned for illuminating purposes and for ornament, by the authorities, has not been allowed to usurp the beautiful wax candle of the rubrics, though its flame be so much more brilliant and useful. In the same way the cruciform church, while a purely conventional idea, appeals so strongly to the Catholic feeling, seems so fitting in a temple erected to Christ, that it must find a place among buildings to the end of time; and even where the exterior will be simple oblong the interior will often take that loved resemblance to the cross, as may be seen in

many churches. These examples will serve to warn the architect against too hasty and radical departure from tradition. In fact that architect will be most successful who can do what has been done from the beginning, blend the past with the present. A good example of this blending seems to be the new London cathedral, in which a clever architect has boldly transferred to London the Byzantine church of Sancta Sophia in Constantinople, with modifications to suit the new country and a different people.

Taking the strength of tradition amongst us, and reading in the church buildings of the past the direction of ecclesiastical and popular taste, it will not be difficult to forecast the general style of church that will be built during this century. In the country and the city the Catholic church will still bear a proper kinship with the traditional forms, with the idea of the massive fully suggested as far as circumstances will permit; in the country traditionalism will be stronger than in the city, because the space demanded by the noble lines of traditional architecture is plentiful; in the city the shifts, to which lack of space will reduce church builders, will always have the traditional in view. The exterior ornamentation will disappear from city churches except in the façade, and therefore the interior will be more highly ornamented than common. More and more will side windows tend to disappear and the lighting come from above, with better results in many ways.

However, it must not be inferred from this devotion to tradition that there need be and will be no varying of forms and no innovations. If, as some believe, we are to have before long a new and more beautiful architecture, growing out of the old, there must be a break from tradition at some point, and it might as well come now as later, if we are prepared for it. The church building needs only to have the dignity of God's temple about it, the mystic shadows of the eternal life suggested in it, to be worthy of the name, no matter what the form. Certainly this dignity is not imprisoned in the Gothic, the Romanesque, or any other consecrated form, so as to exclude the forms that are yet to come from the fertile minds of devoted architects. There is no reason why the styles of architecture called of the French or Italian Renaissance should not be impressed into the service of the church, if architects find them reverent in expression and suitable for church purposes.

There will be no opposition on the part of the clergy or the people to prudent innovation. Pillars may be done away with for the sake of a clear view of the sanctuary; it is not necessary to hold to the ancient form of pew, which itself is an innovation; almost anything may be done in the way of change that will leave intact the main features of the church, namely, its sanctuary, nave and vestibule. The cry made about pillars obstructing the view is of little importance, except with regard to such churches as the Montreal cathedral; for as a rule the pillars are too few and too small to obstruct the view for more than fifty persons in a crowded congregation. The use of iron frames will do away with pillars, and many churches have already taken advantage of the iron and steel supports to get rid of them.

In concluding this rather imperfect view of an important matter I may say that the conscientious architect is

the man who will have nearly all to say in the coming century as to the form and character of the new churches that Catholics will build. Even where he may not make the choice of style and material, it will be his opportunity to adapt the chosen style to present needs and conditions. It is easy to see how much direct influence he will have at important moments. He may dissuade or persuade for the better. The clergy do not wish to make blunders of any kind in building a church and will pay to avoid them, but they must often be shown the precise character of the blunder which they are making before they can be persuaded to adopt the right method. The competent and honest architects ought to be numerous by this time and able to handle church problems skillfully. It would seem that they have yet to acquaint themselves with the peculiar conditions of the Catholic body in order to render that body effective service. If I have done any service to that end in this paper I shall be pleased. There can be no doubt that the field is large, profitable for the most part and artistically satisfactory to competent architects. The drawbacks are indeed numerous, but not more so than with the various Christian bodies in this country. Catholics spend a great deal of money on their ecclesiastical buildings and are fond of artistic effects in style and decoration. During the next generation they will be very active in this department, and ambitious architects of the right caliber may reach present fortune and enduring fame by working earnestly and conscientiously in the Catholic field.

THE CATHOLIC CHURCH.

PAPER III.

BY REV. M. J. LAVELLE.

THERE are of course many and most interesting questions connected with the building of churches, but the two which strike me most forcibly as worthy of discussion in the present symposium are the questions of expense and of style. With regard to the expense of building, its importance cannot be gainsaid, since one cannot travel farther than his money and his strength may carry him. The hardest limitation that the conscientious priest and his architect will meet with is that of expense. This question has a direct and intimate relation with the question of style. These are two very practical matters. What style of church should I build? the priest asks himself; and the next question is: what will my means permit me to build? In this article I shall confine myself, therefore, to a discussion of these two points. It seems to me, after an experience of over twenty years, that an honest and conscientious study of these two points, expense and style, in their mutual relation, would have saved much blundering in the past, as the same study will save floundering in the future.

To the architect I would say over and over again, with all the emphasis and earnestness at my command, handle this question of expense with thoroughness and delicacy and skill. There is just one conviction among the clergy who have had experience and among the clergy who have had none, with regard to architects: that you cannot be too much on your guard against either the folly or the greed of architects. Plain talking will do no

harm in this matter to any but the sinners. When the inexperienced priest goes into the work of building a church his advisers preface their advice with a warning: look out for your architect. Their warning is illustrated by the visible signs of the incompetency or the madness or the greed of architects. I do not discuss how well founded these charges may be; I am only showing the actual feeling among the clergy. They are a trustful set of men, and like all men of that disposition they are likely to be preyed upon by the impostors. But they are rarely imposed upon twice in the same business.

Each pastor knows in general what expense his parish can stand in building a church. That pastor and that parish are responsible for the debts contracted. The diocese and its bishop do not take up the responsibility, although they share in it to the extent of approving the plans of construction, and their moral force may be employed to aid the parish in paying its debts. The business-like architect should make sure that the estimated expense is one that the parish can carry. That is the first step for him. It is purely a matter of business. His next business is to make certain that his plans will keep well within that estimate. It is hard to understand the mania which belongs to some architects of supposed reputation for doubling the first estimate. As a rule the builders of churches are liberal in their ideas and are much inclined to exhaust the treasury for the sake of securing a handsome church. It would seem that this very willingness excites the cupidity of the greedy, and in the end the clergy are led into a very quagmire of debt. It may be a hard saying, yet it is undoubtedly true, that very few of the clergy have a good word for architects in general. This feeling is the natural result of years of distress, brought about by incompetent or venal architects. It now remains with the honest and competent architects, deeply interested as they must be in the progress of architecture, to remove speedily the very nasty impression left upon the clergy; and the very first move in that direction, the most profitable and thorough, will be in this matter of the expense. Let the estimated expense be rigidly adhered to from the beginning. Let there be perfect candor on both sides from the inception of the work. If a church is to cost fifty thousand dollars, complete, let the architect see that he makes no blunder in his plans which will raise the cost one dollar beyond. I think this can be done. There is a general feeling that it must be done, and that architects can be found able to do it. Such architects will easily command the patronage of the clergy, who are more than wearied of the architects with personal interests in quarries and brick yards and terra cotta industries, with partnerships in building firms and acquainted with all the dishonest arts of taxing every industry that has to do with the building of churches and other ecclesiastical buildings. These things are known to the experienced; in time they become the common property of the church builders, and the guilty receive their punishment in the scorn and neglect of their fleeced patrons. This is a subject upon which one cannot write too strongly and which should receive proper attention from architects themselves. The legal fraternity have adopted summary methods by which their unworthy members may be disciplined or actually driven

out; why should not architects of standing protect themselves and their art from the impostors and thieves who ravage under the cloak of respectability?

The second point of my discussion is concerned with the style of church which is to become popular in the twentieth century. There has been considerable discussion on this matter for many years among the clergy, and the virtues of the ancient forms have been highly extolled. Certainly nothing need be said against them, and if the church builders have preferences for the ancient forms of architectural beauty, no one will impugn their taste. Gothic in all varieties, the almost forgotten Greek and the ornate Byzantine, Romanesque, Renaissance, Mo-resque even, early English and late French, there is no reason why we should not have them all. However, there exists a pretty general feeling that with due respect to tradition, the new century and the new continent and the new ideas should generate, or better develop, an architecture peculiar to the people and the times. Of course such an architecture would grow out of the ancient forms, and find its paternity in the glorious past. We have new conditions in America and new customs. For example, we want our churches well heated, well ventilated and well lighted; and we want our people comfortably seated during divine service, and within sight and hearing of the preacher; and we want all the arts that provide these comforts and needs properly represented in the church. The general character of a church should be such as suits the house of God. With this in view and properly expressed, there is no reason why churches should be of forms as various as ordinary buildings. Naturally there will be objections of all kinds to more than accidental departure from the traditional forms; but these objections will rarely come from the men who are building the churches. They will come from the purists and theorists, whose business it is to keep us well reminded of the ideals of the past. Their work is done when they have delivered their reminders and properly impressed us. The people who actually build always desire the handsomest building that their money can procure, and novelty has a charm for them beyond the charms of tradition. While the theorists are discussing past forms and variations of form, the builders are introducing their ideas into actual churches; and if we wish to see how far men are willing to go in order to give full and pleasing expression to their ideas, and to satisfy the peculiar needs of the present generation, we have only to make a study of the newest church structures. These speak more loudly and more emphatically to the inquiring architect than any number of essays.

To my mind there will be no difficulty at all on this question of style, except the difficulty of moderating a too great willingness to adopt the strange and the novel. The chief difficulty will always lie in the question of expense, which has bred so much trouble already, and will continue to breed it as long as architects furnish their share of folly and greed to the work of church building. As the future offers immense opportunities to the architect in ecclesiastical departments, it would really be worth the while of the leading architects to find means of getting into touch with the clergy.

THE CATHOLIC CHURCH.

PAPER IV.

BY REV. H. J. HEUSER.

THE particular purpose and use of a Catholic church building calls for an architectural design somewhat different from that which directs the construction of an ordinary religious conventicle. The difference is emphasized in the monumental churches of Catholic countries, which have thus become the traditional models for the construction of Catholic churches everywhere.

In view of the changed methods in mechanical and artistic treatment and the character of the material used for building in modern times, the question arises whether, and to what extent, the architect is free to depart from the traditional design. The matter has, it appears, special bearings upon the use of columns in the body of the church, upon the widening of the naves, the construction of basements, the addition of towers and other features seemingly ornamental rather than necessary. How far may or should the architect neglect traditional forms in favor of advantages offered from the modern practical and economical view point?

The answer to this question must depend upon the essential purpose which a Catholic church building is to serve. This essential purpose is, in the first place, *conventional*, if I may use the term for want of a better to express the idea of its indicating the gathering of the faithful under one roof. It is, in the second place, *liturgical*.

The *liturgical* appointments are quite as imperative for a Catholic church building, designed upon deliberate principles, as are certain provisions for proper light and ventilation for a living room, and they are regulated by laws which cannot be ignored without ignoring the primary object of the church building as a house of worship.

The liturgical requisites, so far as they affect construction and disposition or arrangement of local detail, may be summed up briefly in the following data:

There must be first a vestibule, the absence of which makes the observance of certain sacramental rubrics, touching baptism, the eucharist, etc., impossible; second, a sacristy, with *adit* and *exit* to the sanctuary; third, a chancel, or sanctuary, of definite dimensions; fourth, a free space for the altar, with no obstruction below it, if the altar is to be consecrated (this commonly affects the position of heaters, iron supports and foundation material generally at the altar end of the church); fifth, a baptistery, or baptistery nook; sixth, belfry (which suggests the tower or steeple construction); seventh, a system of aisles in the nave which allows for processions, free approach to and recess from communion rail, ready access from the nave to the altar at marriage rites, etc.

These essential features being taken into consideration, Catholic architectural symbolism, interpreted to the faithful in the doctrines of the Church, will direct the architect in the further expression of the required appoint-

ments. But these symbolic features are not so essential as those which I have pointed out as conditioning the observance of the prescribed rubrics in the liturgical service. Thus, whilst the cruciform design and the position of the altar toward the east end are not only traditional, but significant, they might easily give way to definite claims of utility. In like manner we see no offence against the laws of liturgical construction if the architect, to accommodate a congregation and to avoid the awkwardness of galleries hindering light and freedom, were to depart from the accustomed narrow nave or triple nave, and turn the space available into one broad area with seats, allowing, however, for the arrangement of aisles, as already indicated.

Regarding the construction of basements for uses of worship, there is no rule. They are not contemplated in the liturgy, and they open the way to numerous abuses, are unhealthy and lack the essential circumstance which inspires devotion. The basement chapel should never be made a permanent feature of the church where regular services can be held. Its use as a crypt is, of course, a different thing, and wholly exceptional in the modern church.

One word touching the monumental character of Catholic church buildings in modern times. Whilst a close imitation of the mediæval models is probably the nearest approach to the perfect symbolic expression which the architect should follow at all times, there is one feature in which the monumental church buildings of to-day differ radically from those of the past. This difference arises from what I have called the "conventional" purpose of the mediæval and the modern church respectively, and affects the dimensions and proportions of the building as well as its appointments. The old churches were built much larger than is necessary or desirable in our day, because they were to be the meeting and rallying centers for all the great popular movements which found their inspiration in the religious faith of the people; and that faith permeated every sphere of social and political activity. It was in the great cathedrals that kings were elected and crowned; here the universities assembled their ten thousand students to listen to men like Albertus Magnus, Thomas of Aquin, or Abelard; here councils and synods were assembled, in which all the people took part. Hence, grandeur and beauty combined to rouse civic consciousness no less than religious fervor; nay, both were so closely bound together that faith freely yielded the divine right to civil authority.

Our churches serve no such purpose; they are houses of worship for a limited and generally well-defined congregation, and our social and civic conditions make the immense cathedral—except in such centers as Rome—wholly purposeless. The old cathedrals were intended to be universities of religious teaching and action; the modern cathedral or parish church is a conventicle for a congregation to be seated in defined numbers, to enter at definite hours, and circumscribed by the limits of parochial jurisdiction.

This difference must, of course, affect the design and probably also the artistic and mechanical treatment of the material employed. Nor need this be done at any sacrifice of harmony or beauty.

The Work of the Boston Schoolhouse Commission, 1901-1905.* I.

BY W. H. KILHAM.

IN the year 1901, the office of city architect having previously been abolished, the planning and construction of new school buildings in the city of Boston and the repairing and alteration of old ones, as well as the selection of sites for the same, were placed under the control of a Board of three Schoolhouse Commissioners, appointed by the Mayor. The previous history of schoolhouse planning in Boston under the city architects, several of whom had been men of high professional standing, forms a chapter of great interest in the architectural history of the city. During the four years that have elapsed since the formation of the present board the story of its work and aims presents points of much greater importance to the profession than does the work of any previous period.

Starting clearly afresh and free from any hampering traditions, the first work of the newly appointed Commissioners was to gain from a general survey of the work in other cities a comprehensive idea of the progress that is being made in American schoolhouse planning and construction. From the information thus gained, added to the data already in their hands, the Board has evolved not only a general type of schoolhouse lay-out, but a uniform system of specifying, of construction and of business administration which it is thought will result in supplying the most approved accommodations at the lowest reasonable cost to the municipality. It is worthy of especial note that the Board is continually working towards an ideal and that its later buildings show a marked improvement over those of the first period.

Having obtained from a general examination a clear idea of the latest ideas in American practice, the next step was to decide what should be the requirements of a Boston schoolhouse. This matter having been settled, the Board could begin on a systematic course of planning a series of buildings proper for the needs of the Boston public school system.

Architecturally speaking, it is also interesting to observe that after the very complete survey of American work which was made the Board has not confined its architects to any definite architectural style. Although it found various localities adopting "Collegiate Gothic," and even New York building schoolhouses on models of Oxford colleges and Loire chateaux, it has steadily favored sensible and businesslike types. Its only suggestions are along the lines given below, as to materials, cornices, roofs, etc., which will be structurally durable and useful. Gables, towers and battlements are not favored. A stack of ventilating shafts is given a simple and dignified outline and let alone, with no attempt to give it the appearance of an attenuated donjon or crenelated turret. Unnecessary porches and projections are suppressed. Windows are flat-headed and kept clear of mullions and transoms. In general the "modern Colonial" or Georgian feeling seems to have prevailed, although there are a few examples which show an English influence.

* During this period R. Clipston Sturgis has been Chairman of the Commission.

The first Annual Report of the Board contains an interesting account of its visits to leading American cities, together with the results of its observation. Between the ninth and twenty-fourth of October, 1901, the Commissioners visited New York, Philadelphia, Washington, Chicago, Toledo, St. Louis, Cleveland, Buffalo and Rochester, for the purpose of examining their school buildings. The general conclusions which they drew from this trip are embodied in the following paragraphs:

CONCLUSIONS DRAWN FROM TOUR. — "As to schoolhouse lots, it is desirable, when the value of the land permits, to take sufficient ground to have playgrounds about the building. When it is not possible to have ample playgrounds it is necessary to make provision for this in the building, either by setting aside the basement floor for this purpose, or by utilizing the roof as a garden, or by a combination of these two plans.

"The best building material seems to be red brick. The buildings should be of fireproof construction, and this is being adopted in every city where it is felt that the finances will warrant it. Wooden floors in corridors are not desirable; either terrazzo, cement or rock asphalt is preferable. The tendency is toward wider corridors.

"The schoolrooms should have wooden floors, maple being in every way satisfactory. It is better to have the classrooms lighted from one side, although some authorities, notably those of Cleveland, do not believe in it. There should be separate rooms for the children's clothing, with entrances from the classrooms rather than from the corridors. The schoolroom doors should contain plain glass panels, in order that the master, when passing through the building, may have a general oversight of the school without actually opening the doors. Painted burlap for dadoes, both in corridors and classrooms, has the unqualified support of the authorities in Chicago and St. Louis, where it is used extensively. It is found advantageous to omit all thresholds.

"Stairways are generally built of iron with treads of wood, slate, marble, North River stone or asphalt. The two latter are preferable to the others, in our opinion. Teachers' retiring rooms are provided in all modern school buildings. Both bookcases and teachers' closets should be built into the rooms.

"The sanitariums should have asphalt floors. The walls should be either painted or of enameled brick. Latrines are used very extensively outside of Boston and might well be used in any of the primary schools in Boston, and possibly in some of the grammar schools. The tendency is to do away with high partitions and in many cases to omit doors.

"The twin stairway in New York is particularly interesting and worthy of use when circumstances permit.* We found that Boston was doing more in the way of gymnasias and bath facilities than any other city with the possible exception of New York. Assembly halls, in grammar schools at least, are not a general feature in schoolhouse construction, but in many places a system of sliding partitions is employed, so that the whole or a greater part of a single floor can be thrown into one room.

"The type of school furniture used in Boston, namely,

* The Commissioners later decided that serious objections to twin stairways existed and have not adopted them.

the individual desk and chair, we found nowhere else except in Washington. It should be said that the Boston type was approved by those with whom we talked, the claim being that it was not used on account of the increased expense.

"Telephone systems connecting the master's room with the various rooms in the building, while adopted in Boston, were not found in any other city. In New York a system of speaking tubes is used, and even that was not considered absolutely necessary. The use of platforms in classrooms has been practically abandoned.

"The ventilating systems are almost as various as the styles of schoolhouse architecture. The general tendency seems to be to use the blower or plenum system either absolutely or in connection with the gravity system. In many places where an elaborate fan system is in use it is not operated except when steam is carried in the boilers for heating purposes.

"From the standpoint of economical and satisfactory construction it is desirable to complete schoolhouses under as few contracts as possible.

"In most places the janitors are called upon to make all the ordinary repairs. In some places they do the general work of cleaning furniture. To obtain satisfactory results the janitor's services should be under the control of those having charge of the repairs of the building."

WHAT CONSTITUTES A TYPICAL BOSTON SCHOOLHOUSE. — Before starting on the construction of a series of buildings it was first of all necessary to determine just what would be included in a typical Boston schoolhouse. While no doubt the popular demand for baths, gymnasias and "educational centers" is a praiseworthy one, the Board felt that the available funds at its disposal would scarcely allow it to undertake work which might properly be left to the bath department or the park department. After conferring with the school committee, the general policy outlined in the following extracts was adopted:

"Your committee has personally visited a number of schoolhouses, including those recently completed, as well as others of an earlier date, but comparatively modern, and has also obtained the opinion of the superintendent upon the subject, and as a result of their investigation are of the opinion that a grammar schoolhouse should, in addition to the hall, class and dressing rooms, contain a master's room, a teachers' room and a storeroom for books; by the latter is meant a room in which text-books and books for supplementary reading may be stored. If the school possesses a library it can be kept in bookcases placed either in the master's office, in the hall or in the teachers' room, or in all. Rooms for woodworking and cookery should be provided wherever rooms for these purposes do not exist in the immediate neighborhood. Neither a sub-master's office, nor separate reception rooms, nor recitation rooms, nor a drawing room, nor a sewing room, nor a laboratory appear to be essential. They are luxuries which can be dispensed with and which ought to be dispensed with under existing circumstances. It is also believed that a gymnasium and baths are not necessary, except perhaps in certain of the more congested quarters of the city. In a primary building one teachers' room and a small storeroom for books are all that are essential in addition to the classrooms and dressing rooms.

"This adoption of a definite policy with regard to schoolhouse construction would tend to produce a certain general uniformity and correspondence between buildings of the same class erected in various parts of the city, not necessarily in their architectural features, for here may well be allowed considerable latitude for the exhibition of taste and skill on the part of the various architects, but desirable from an economic standpoint. It is of course clear that there is a certain type of excellence in construction and material which the city ought reasonably to conform to in new buildings, far in advance of that followed twenty or even ten years ago; but it should not be forgotten that with a fixed and limited amount available for additional permanent accommodations, increase in cost of construction involves a corresponding decrease in the number of pupils to be accommodated, and consequently no one building should be allowed materially to exceed in cost the standard which may be established for guidance to the school plant during the next few years.

"Thus your committee believes and the Board of Schoolhouse Commissioners agrees that the new schoolhouses about to be erected should be plain, substantial structures, built in the most substantial manner, devoid of unnecessary or extravagant ornamentation, but attractive and tasteful from an architectural standpoint, the exterior walls to be in general of plain brick with a reasonable amount of trimmings and the interior fittings such as will meet the requirements of durability and fitness for the several purposes for which they are intended, without being unnecessarily expensive."

GENERAL DEDUCTIONS. — Aside from the general requirements in regard to simplicity in the character of the exterior of the building, thus noted, the Commissioners thought at first that cornices with heavy projections and roofs of steep pitch are alike undesirable. It seemed to them that with the necessity for windows extending to the ceiling line, a cornice with heavy projection would either cast a shadow on the windows of the top story, or if raised sufficiently above the windows to avoid this, would be enclosing more space above the ceiling than is necessary for non-conducting purposes; and that a pitched roof was undesirable unless the space in the roof can be utilized for an assembly hall, which in the case of primary buildings is not required.

The Commissioners therefore suggest that where a flat roof is adopted the cornices should be simple, with slight projection, and the parapets of so little elevation above the roof as to make it not extravagant to flash them completely with copper on the inside, and that where a pitched roof is used, which serves merely as a covering for the building, it should be of as low an angle as is compatible with a tight roof, and with the eaves of such projection and height above the windows of the upper story as not to interfere with their light. After one year's experience, however, the Board concluded that "in some cases it was found that this had been carried to an extreme and that we have been cramped for room to gather the vent ducts together. It would seem as if occasionally a roof of low pitch were really more serviceable and nearly as economical. To keep the schools technically 'first class' the pitched roof must be fireproof frame. With a pitch roof outside gutters point to the use of outside conductors instead of conductors of cast iron

in slots inside, and in this case the board suggests gutters hung free of the eaves."

The following general conclusions were drawn as a guide towards a standard:

Primary rooms should be about 24 by 32 feet to accommodate 50 desks. This, during the second year, was reduced to 24 by 30 feet, and for ungraded classes in the foreign districts, where older children are in lower grades, the size of desk would be increased and the number of them diminished. The largest primary desks are 21 inches wide; they are spaced with an aisle from 15 to 17 inches and 28½ inches apart from back to back. Grammar rooms are 26 by 32 feet for 50 children. The desks are 24 inches wide, the aisles 17 inches, and the desks 34 inches apart from back to back. The width of desks was changed to 23 inches the second year. The children's desks and chairs are the subject of a special report, prepared for the Commissioners from the best authorities by Dr. Frederic J. Cotton. High school rooms are sometimes the same as grammar, but may vary in size and contain desks up to 26 inches wide. The total area of the building on a classroom floor should not be more than double the area within the walls of the classrooms on that floor. The height of the rooms, when lighted from one side, should not be less than 13 feet; the windows should extend to the ceilings and should contain a glass area equal to one-fifth of the floor area—roughly from 160 to 175 square feet, measured inside the sash.

The coat room should be adjacent to the schoolroom at the teacher's end, and have two doors opening into the schoolroom for circulation, but none into the corridor. The teacher has thus more perfect control of the class.

Corridors should be wide, at least 10 feet for a six-room floor plan, and with external light. Staircases should be fairly wide, but preferably not over five feet, and with risers not over six and one-half or seven inches, and even less in primaries. Where toilet rooms are in the basement it is desirable to arrange the stairs so that those coming in and going to the toilet rooms will not meet on the stairs those going up to the classrooms. In most cases it is desirable to have basement entrances, with convenient thoroughfares through the toilets to the staircases. The staircases in daily use should be the fire escapes, and should therefore be easy of access and fireproof.

The toilet rooms in general are in the basement, but, as is indicated by the plans which will be given with the succeeding articles, in certain buildings there are examples of distributed toilets on the various floors. In one building the height of two classrooms serves for three stories of toilets, etc.

In general the simplest forms of fixtures, the most easily cleaned and adapted for thorough ventilation, are the most sanitary. Ease of cleaning should be a prime consideration in the school generally; and a hospital base, a minimum of wood finish in the rooms, and the simplest detail on the stairs are desirable.

The bookcases should be of the simplest description, but with movable shelves, dust-proof and locked. The teachers' desks should be of hard wood, with a plain, flat top. Desks for primary teachers should have one set of drawers, those for grammar school teachers two sets of drawers, with slide, and rail on back.

The furniture for master's and teachers' rooms should be a roll top desk, a lounge, either rattan or covered with an easily cleaned material, a few simple chairs, a bookcase and a good Brussels carpet. An opportunity for a gas or electric stove in the teachers' room is generally advisable, where there is no cooking school.

The construction of all buildings has been determined upon as first class, the additional cost over the cost of second-class buildings being comparatively small, and the buildings being free from shrinkage and the movements necessarily accompanying a building with floors and partitions framed of wood. To take advantage of the law about staircases, it is necessary to make buildings first class throughout, including the roof. In many cases the board would be content to frame the roof of wood, protecting it on the under side with non-combustible material, if it were not for the clause relating to staircases, which provides that in buildings not of first-class construction one staircase shall be enclosed in brick walls and shut in with fireproof doors. Such enclosure the Board considers undesirable, and to avoid this makes the roof fireproof, and the building first class, thereby taking advantage of the law which exempts buildings of the first class from these restrictions.

In the planning of the buildings the Board has found that the rules laid down in the first two reports have been fairly accurate.

These are, first, that an economical floor plan should never exceed an area of double the area of the classrooms on one floor. For example, a primary building having five rooms, 24 by 30, on a floor, should have an area of not over 7,200 square feet.

Second, that a primary building should not contain more than 30,000 cubic feet per classroom, if its classrooms are in excess say of fourteen rooms, and it should not exceed 35,000 cubic feet per classroom, if it has a smaller number of rooms. On both sizes the cost is to be estimated at about 22 cents; for example, with these figures the cost of a ten-room primary would be \$77,000, and the cost of a twenty-room primary would be \$132,000. A grammar school should not exceed 40,000 cubic feet per classroom, if it is a building of over eighteen rooms, and a building of less rooms should not exceed 45,000 cubic feet per classroom, the cost again being put at 22 cents per cubic foot. The cost thus arrived at must include all trades, the building ready for furniture and the grounds entirely finished. It does not include commissions or furniture.

Third, that the exterior should be of the simplest description, it being understood that with the smaller buildings the utmost economy must be observed to keep within the limits, and that with a very large building slightly more freedom is allowable.

Fourth, that the grounds about the buildings shall be entirely completed and included in the contract, and that they shall have brick-paved playgrounds for boys and girls, not necessarily separated, brick-paved walks, a brick-paved, cement-set road for coal, and the remaining space laid out either for a permanent planted space or else for experimental gardens for the children. The area devoted to these purposes will, of course, vary slightly with the position and character of the building and the amount of space that the Board is able to buy for such purposes.

Brick Architecture in Denver. I.

WHILE Denver may be regarded as a brick built city, it is a notable fact, nevertheless, that there is, comparatively speaking, very little that is interesting from the architect's standpoint.

During the last few years Denver has made much progress in the organization of civic bodies, with the one object of controlling and elevating all matters of art pertaining to the city and county of Denver.

The recent adoption of the new charter by the municipality offered an excellent opportunity for the establishment of the Art Commission, the credit of which is due largely to Mr. Henry Read, an artist of this city. The commission consists of six members, of which one is an artist, one a sculptor, one an architect; the other three are non-professional, and the mayor an *ex-officio* member. No work of art can become the property of the city and county except by the approval of the Art Commission.

The Municipal Art League was established in 1900, "to procure united action in the promotion and protection of public works of art and of artistic municipal improvements." It consists of thirty members, representing twelve permanent clubs and organizations.

Another organization of note is the Artists' Club, which has done much towards fostering and improving the art conditions of this city.

The Park Commission is also showing most commendable enterprise by acquiring large tracts of land throughout all portions of the city, and with the building of the new boulevard which runs along the banks of Cherry Creek, a stream which, under its present conditions, is most unsightly, will make a most superb and sightly boulevard. Other boulevards of similar importance are either now being constructed or planned, all of which will form a most beautiful system of drives.

Getting back to the subject of brickwork, one of the best brick buildings in Colorado is the Antlers Hotel, located at Colorado Springs, a small city a few miles south of Denver, most superbly located at the foot of the mountains. The architects are Varian & Sterner. It is built of buff brick and white terra cotta, and has a light red tile roof.

Two club buildings are illustrated, the first, the University Club, by Varian & Sterner, built of two shades of buff brick and a white lava stone; and the second, The Woman's Club, by Fisher & Huntington, built of a light gray brick and greenish gray sandstone.

Denver possesses very little ecclesiastical work of merit, this being especially true of interesting brickwork.

The Jewish Synagogue, by the late John J. Humphreys, is, perhaps, the most interesting. It is constructed of a light colored buff brick and gray sandstone.

The church by H. T. E. Wendall is built of buff brick and gray sandstone. While this building is very much out of scale, it is not lacking in interest by any means.

The Consumptives' Home in North Denver, Varian & Sterner, architects, is a very successful building; the piazza, connecting the two wings, recently added by Mr. Sterner, has improved greatly its general appearance. The chapel, connected with the Home, by Mr. Sterner, is a very successful building and well suited

to its environment. The interior is lined with a buff brick.

Mr. Sterner's own residence is built of rough red brick and painted a dark yellow ochre color with a dark green roof.

Very little of the so-called modern French style has been attempted in Denver. A residence in this style, by Fisher & Huntington, is illustrated. The building is laid up in a beautiful buff shade of gray pressed brick and white terra cotta ornamentation.

The house by Marean & Norton is buff brick with a light colored red stone basement and a red roof. A house of somewhat similar style, by Fisher & Huntington, is built of gray brick. Molded brick of similar color, in a darker shade, is used for the window jambs and in the arches.

The one-story house by Wagner & Manning is a rather pleasing solution of a small house.

Two other houses illustrated, by Gove & Walsh, are constructed of gray pressed brick.

The dark buff brick residence with white terra cotta ornament, by Boal & Harnois, illustrates one of Denver's most successful houses.

THE HOUSING OF THE POOR.

SOME time since the announcement was made that Mr. Henry Phipps, the Pittsburg steel magnate, had made a gift of one million dollars to be used in providing improved tenements for the congested sections of New York City. A beginning is to be made at once, the first set of plans carrying out Mr. Phipps's intentions have been filed with the tenement house department, and it is expected that the structures will be ready for occupancy in the spring. The building will have a frontage of 180 feet on the street, and be built around two open courts connected with the street by archways 25 feet wide, extending through four of the six stories. The courts will each have a fountain and a certain amount of planting, and the tenements will have an unusual amount of what we term modern improvements, such as steam heat, electric lights, air coolers, whatever that may be, garbage incinerating plants, shower baths for each family, a room on the first floor for baby carriages, a kindergarten and a roof garden; and all this will be offered at rentals not exceeding in any case fifteen dollars a month for four rooms. His house will be filled and have an immediate long waiting list not drawn exclusively from those who are now paying five or ten dollars a month for poor quarters, but rather from the better class of mechanics who may be now paying twenty or twenty-five dollars for quarters less eligible than Mr. Phipps is offering for fifteen. The resulting condition in that immediate neighborhood will be overcrowding of the already thronged tenements. This is the ever-discouraging feature of attempts to improve the sanitary conditions of the miserably poor. When better houses are put up they are always filled by the well-to-do and not by the miserably poor, and these latter, in every case, as has been proven in Paris, London, Glasgow, New York, Boston and Chicago, are worse off rather than better. We would not argue from this that efforts such as Mr. Phipps has made are to be deprecated. Simply the millennium has not yet arrived, and the solution of the tenement house problem may be as far off as ever.



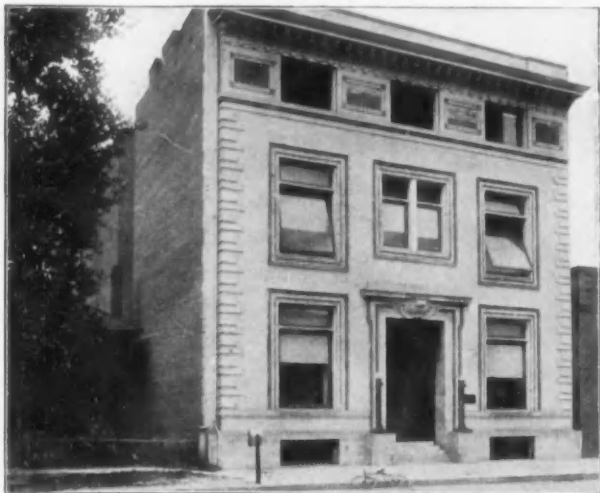
ANTLERS HOTEL, VARIAN & STERNER, ARCHITECTS.



CONSUMPTIVES' HOME, VARIAN & STERNER, ARCHITECTS.



PIAZZA, CONNECTING WINGS, CONSUMPTIVES' HOME.



WOMAN'S CLUB, FISHER & HUNTINGTON, ARCHITECTS.



UNIVERSITY CLUB, VARIAN & STERNER, ARCHITECTS.



CHAPEL FOR CONSUMPTIVES' HOME.



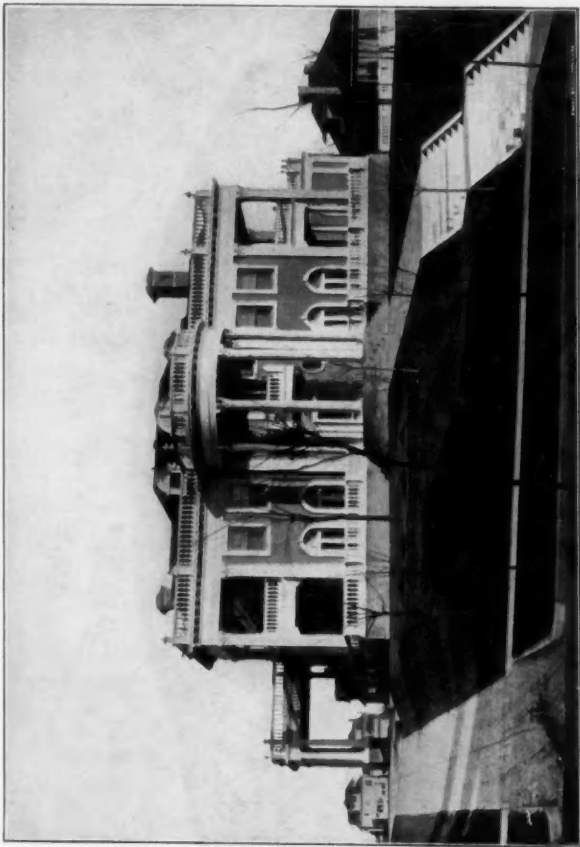
F. J. Sterner, Architect.



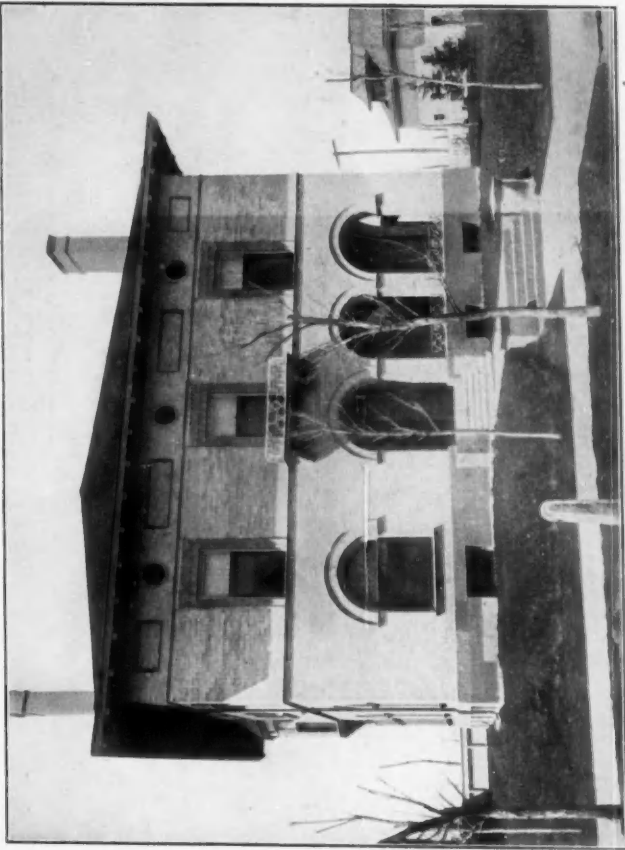
SYNAGOGUE, JOHN J. HUMPHREYS, ARCHITECT.



CHURCH, H. T. E. WENDALL, ARCHITECT.



HOUSE BY BOAL & HARKNOIS, ARCHITECTS.



HOUSE BY MAREAN & NORTON, ARCHITECTS.



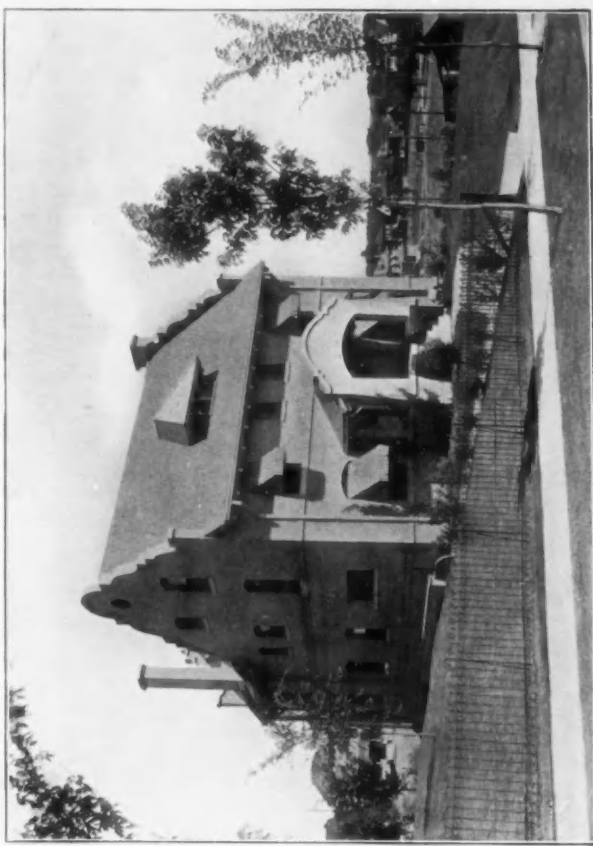
HOUSE BY GOVE & WALSH, ARCHITECTS.



HOUSE BY FISHER & HUNTINGTON, ARCHITECTS.



HOUSE BY WAGNER & MANNING, ARCHITECTS.



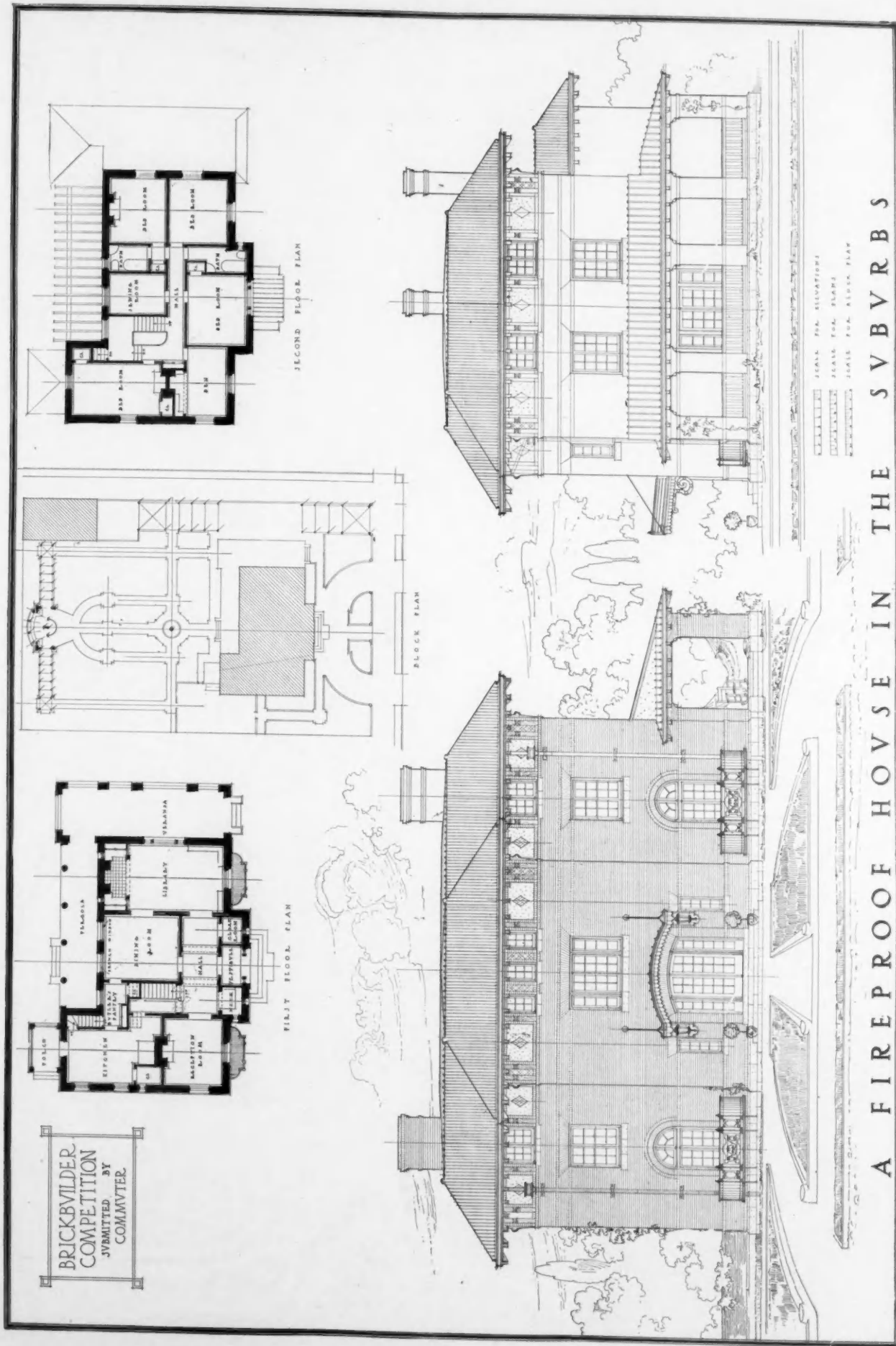
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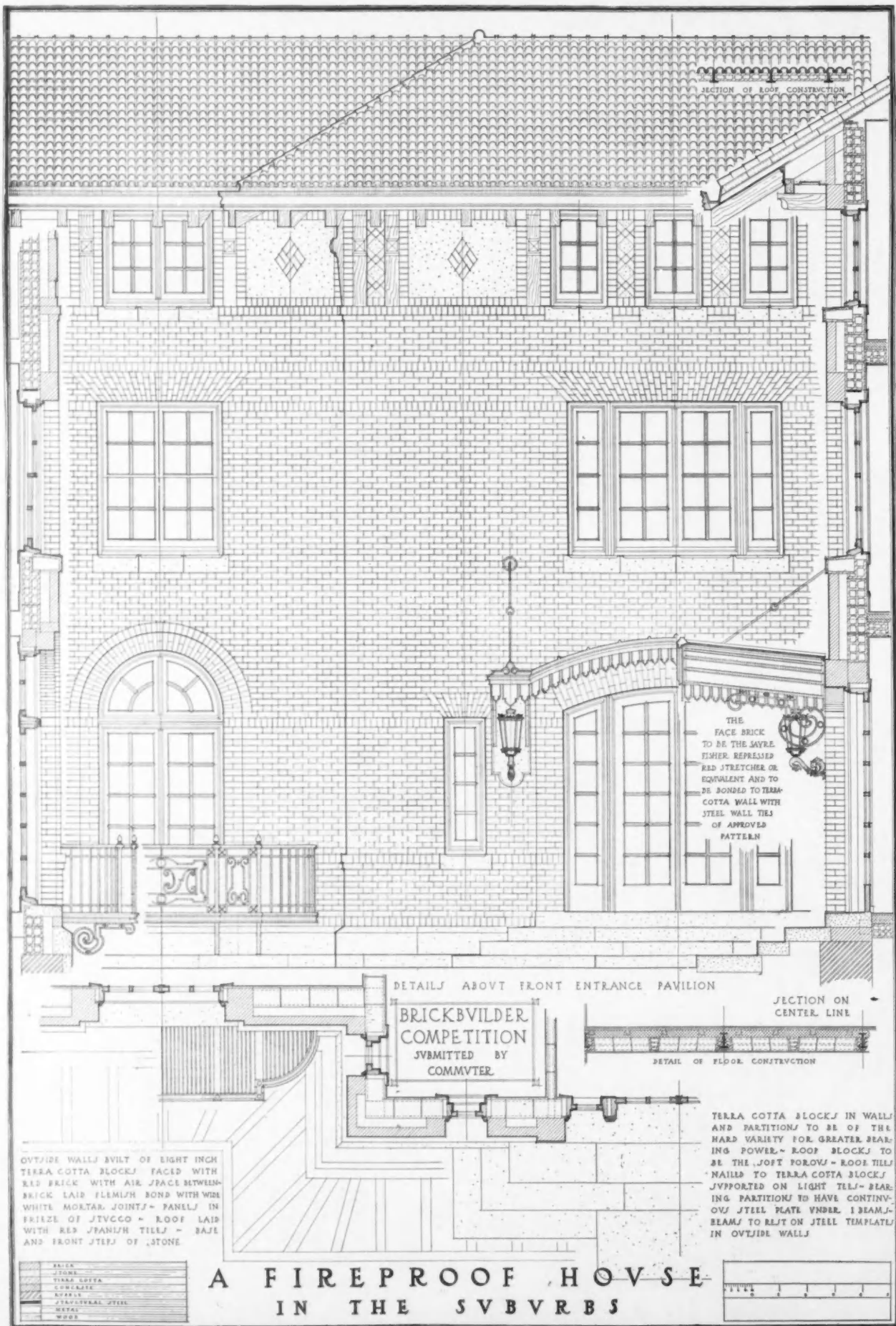


HOUSE OF F. J. STERNER, ARCHITECT.



A FIREPROOF HOUSE IN THE S V B V R B S

FIREPROOF HOUSE COMPETITION.
Mention Design, Submitted by Russell Eason Hart, New York City.



✓
Tile and Faience Work in France.

II.

BY PAUL DEVOE.

THE character of French work has always been that of delicacy of finish. The constant desire to refine in idea, in form, in color is apparent even in the centuries in which other nationalities have produced virile but crude workmanship and design. To the French critic no amount of barbaric splendor, of grandiose concep-

lowered towards neutral. The flaming yellows and reds of India, the black and gold and red of Venice, the depth of blues in the Persian tiles are but occasionally seen in the walls of France, but in their place are deep cool grays and soft browns, neutral greens and mellow reds, and a profusion of delicate tints, the colors of Gobelins tapestries. And associated with this comparative sobriety of color, and this desire to avoid violent contrasts or aggressive schemes, is great delicacy of line, of grouping of forms, of touch in draughtsmanship and of purity of tone. The tiles of France, whether they be



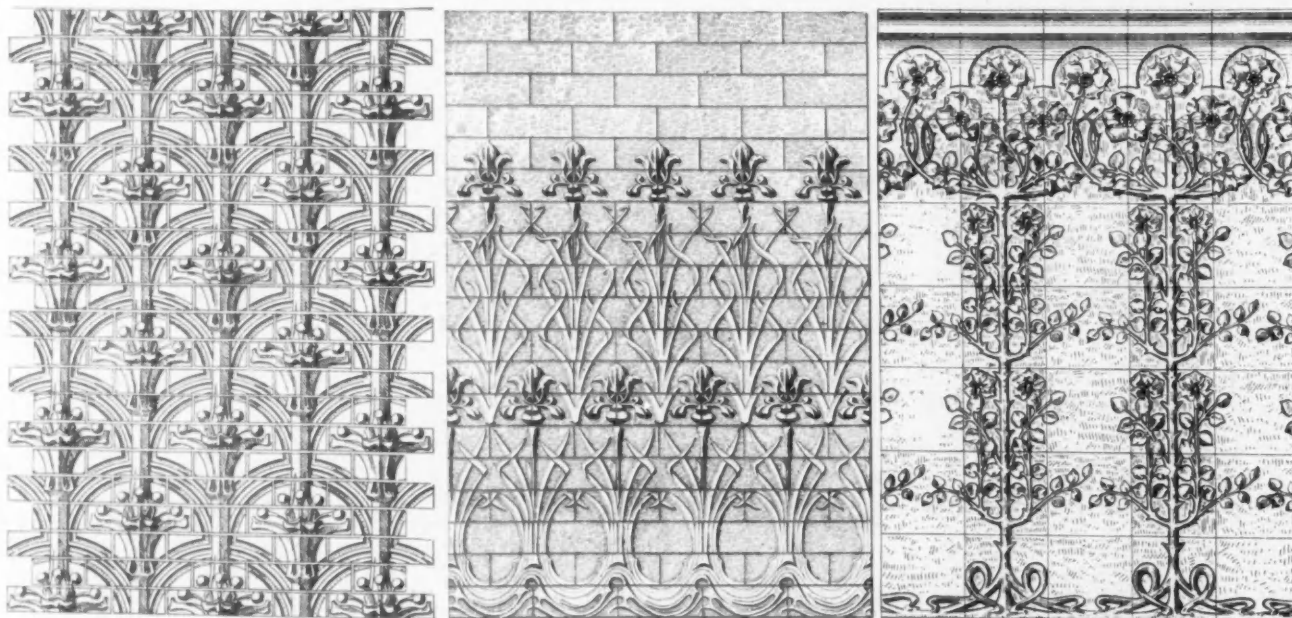
WALL TREATMENT WITH ENAMEL TILES.

tion, of general effectiveness associated with undeveloped forms, could excuse lack of the final touch, the completed detail. A standard of achievement based upon such premises must include those slight shades and modulations which the French express by the term "nuances." The avoidance of violent contrasts, the softening of tones, of colors, of intensities, are thoroughly characteristic of all French art. So much is this the case that subtle shades of neutralized colors are known as French grays and French greens. Mauves, lilacs, lavenders, pale rose and delicate blues all suggest the gamut of the French palette, and if the tones are deepened they are

dull surfaced without glazing, or high-fired dull glazes or lustrous glazes, are notable for the precision of their drawing and a harmony of tone which at times approach monotony. The earlier examples of the thirteenth and fourteenth centuries are simple tiles, without glazes, in which the patterns are simple and contrasts produced by the differences in clays only. They are soft, low-toned reds, yellows and grays, and the ornament does not fill the field as in Oriental tile and in those of Spain, but is firmly defined upon a larger proportion of field than in any other tile. Also even in very simple design all stem lines are firmly drawn and leaf forms clearly defined.

There is a constant tendency to resort to naturalistic representation rather than to conventional precedent. It is characteristic of all naturalistic ornament, which partakes largely of actual representation, that to be successful it must be done by a very skillful hand. There can be no attempt to portray nature but what will enact a severe penalty from all except masters of draughtsmanship. Conventional forms are a law to themselves and justify themselves by beauty of composition, of tone or of color, but representation of natural form invites direct comparison with the actual object, to the lasting condemnation of the representation if it be unskillfully done. It is for this reason that so little naturalistic work commands respect. If any set of draughtsmen or designers could be expected to succeed in this type of work it is the French, whose precision of drawing and delicacy of color are unsurpassed. Their very skill has probably led them towards the portrayal of foliage, of flowers and of

tiles of exceptionally delicate tints, producing an effect of daintiness, of freshness, of that quality which the French term "confection," and which are distinguishable from the tiles of other nationalities merely by this quality. As has been stated, there was no attempt to get the richness of effect of Oriental or of Spanish tile. The third variety, that of painted tile, does not in any way resemble the Dutch or English or Spanish painted tile. Much of the field remains intact and the painting is that of delicate flowers, or of finely drawn medallions resembling the china painting of Sèvres, of Dresden; in fact the French tiles of this type seem to be dainty pieces of china. If used in large surfaces the effect is that of a flowered chintz or sprigged muslin. They are peculiarly adapted to boudoirs and small baths. The patterns are simple, not complex; the painted areas are not broad, but painted with the point of the brush, not the side, and there is but little if any running of the color in



SIMPLE BUT EFFECTIVE TILE PATTERNS.

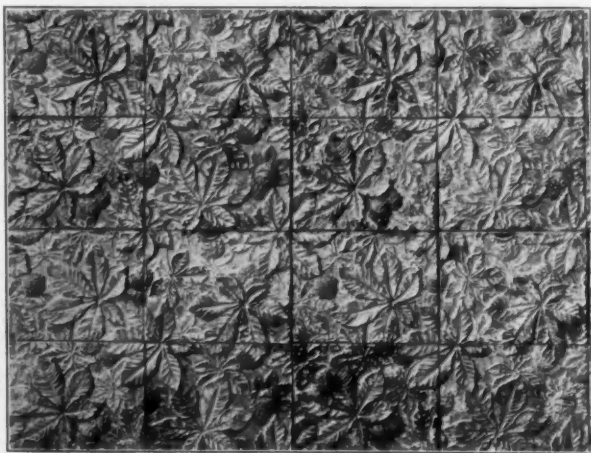
natural forms in their painted tile, while in their plain tile their appreciation of the slightest variations of color has led them to subtle and delicate tones. It is impossible therefore to give an idea of the individual character of French tiles by photograph. The shapes may be the same as those of English or of Spanish tile, but the coloring is of a totally different character and quality. Delightful combinations of pure tints in lines and zones around fields are often used on walls and on floors and ceilings. The bisques are like those of porcelain, the glazes fine and clear. The molded tile have finer profiles than are usually to be found in the tile of other nations, and the modeled tile are very beautifully finished. We find then that tile in France, until within a few decades, were of three varieties; first, those which were used for floors in churches, large halls, etc., and which were often used in combination with stone as borders about tablets, around windows, etc., in fact in a very similar manner to their uses in Italy and to the use of terra cotta plaques. The patterns are simple, largely geometric. The second variety was that of plain glazed

the firing. As has already been stated, naturalistic design demands mastery of drawing, and many of these tile were designed and actually painted by artists who did them more as pastime than as their more important work, which was that of landscape painting, designing for tapestries or for decoration. Many of them are signed. The result is that the work is finished, is sophisticated and has little of the naïve quality of work done by peasants or by draughtsmen of inferior ability. Its beauty lies in the skill with which it is done as much or more than in its general effect. For this reason any imitations of these tiles at once announce that they are forgeries. There is nothing feebler in its effect than the imitation of a French painted tile, as there is nothing of its kind more cleanly cut, delicate and skillful than the original.

The desire to increase the size of the individual tile and to practically produce plaques of clay of sufficiently even surface for floor or wall surfaces has been especially evident in the tile factories within the last twenty years. The difficulties have been gradually overcome. To bake

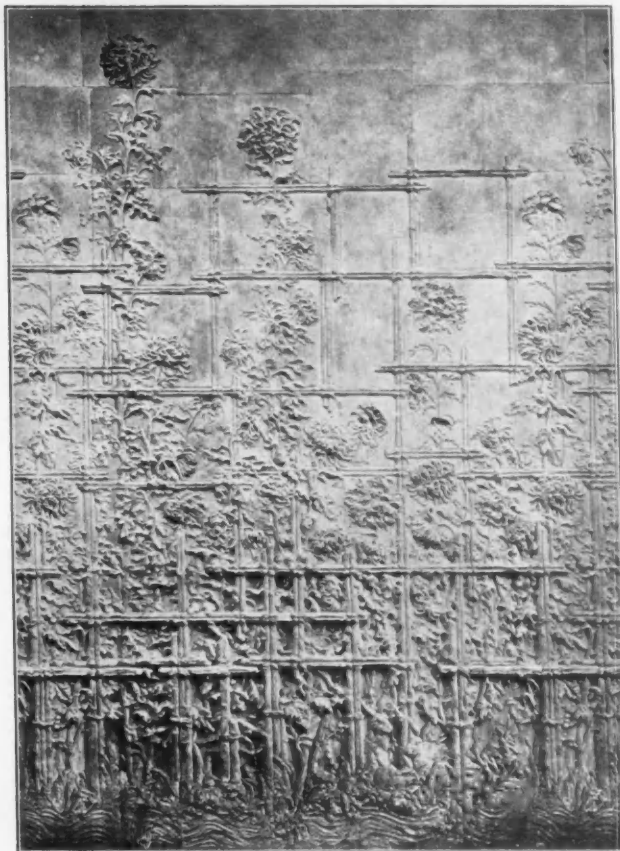
a large mass of clay homogeneously so that the center should be equally fired with the surface and edges, and there should be no warp or twist or crack, required an intensity of heat which overwhelmed and burned out the usual glazes. As a result experimental effort was devoted to obtaining glazes which would stand very intense heat, and substances which could be incorporated with the clay and which would color it in the firing, etc., and various degrees of success have been obtained, and the so-called sharp-fire clay has appeared. The claims that are made for this are fully substantiated by the tests to which it has been subjected in the last few decades. It possesses great strength, imperviousness to moisture and consequent durability, its glazes or coloring are incorporated with its mass and it can be produced in large slabs or plaques with precision of edge and uniformity of surface. The difficulty of obtaining large floor tile which would lay evenly and not leave depressions in the floor has been overcome.

There has also occurred a very natural consequence to the enlargement of the superficial area of the tile. So long as tile were from four inches to eight inches in their longest dimensions, the field of each was necessarily limited, and the size of each unit set to a great extent the measure of the repeat of its ornament; but now that each piece can be made of materially greater area the field invites to a totally different type of ornamentation, it becomes the background for a picture or a factor in a large motive. The wall as a whole is treated as a composition, and the divisions between the tiles are merely necessitated by the exigencies of firing the pieces. These pieces can be of



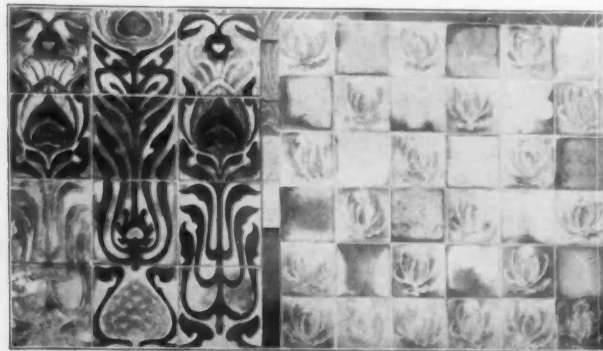
TILES FOR WALL SURFACES.

any size or shape, they fit together like a child's dissected map, and each piece can be so accurately made and fitted that no discrepancy appears at the joints. In a certain sense this type of wall decoration has lost the character of the material, and is merely making a large composition in an imperishable material, the joints being occasioned only by the limitations of firing. Especially is this the case with the modeled tile. These are so exquisitely made that in most cases they are done by a sculptor of very considerable ability, especially by one who is a master of low relief, a medalist. It has always been characteristic of French designers that they have either refused to be bound by, or have ignored the limitations of materials. If they wish to produce a certain



DECORATIVE PANEL IN TILES, THE CHRYSANTHEMUMS.

effect, to display a certain desired composition upon a surface, they do not hesitate to do it in any material they wish, regardless of the fact that no such result would have evolved from the natural development of the material itself. They have the pride, the arrogance of superlative skill. To a certain extent this attitude is Jesuitical, the end obtained is assumed to justify any means employed. It should be apparently obvious that a surface covered with identical units, such as tiles, suggests repeating patterns or at least compositions with repeating factors, but the French treat these surfaces exactly as though they were whole and not composed of a number of parts, as if they were a canvas, not a mosaic of large scale. The skill with which they draw and color the ornament almost persuades admiration, almost convinces that the effect is satisfactory, but there remains an after-math of desire that work so skillfully done should have



TILES FOR WALL SURFACES.



A FRIEZE IN HIGHLY COLORED TILES.

been more logically conceived. Occasionally there is an indication that however free from the trammels of conventionalism may be the general design, there is a recognition of its component parts. Such a recognition is manifest in the chrysanthemum pattern growing behind a bamboo lattice, the stems of the bamboo following the joints of the tile. There is no new conception, but the variation of size in the tile, each corresponding to the rectangle enclosed by the pieces of lattice, is both ingenious and effective. There is also in these modeled French tile a very strong feeling of the material in the surface modeling. They are unmistakably of clay and modeled by hand; there is no indication of stamped work, or resemblance to repoussé work. In spite of the fact that they are cast in molds, the character of the original modeling has been preserved, the modulations remain, the edges are crisp and clean-cut. This alone would produce an impression of finish superior to many other varieties of tile.

The laurel and rose design exemplifies the care with which details are inserted. Certainly modeling cannot be carried further than it is in the thistle leaves and the rose garlands. Each vein and petal is not merely indicated but carefully drawn, and a delicate dike is raised between each area of color so that its edge may remain intact. It will be seen that any such designs as these can only be produced in the finest bisque, almost equal to kaolin, as the fine lines require such precision, and that they can be made by only the most skillful of sculptors and modelers.

Of the grades of tile, inferior in workmanship and draughtsmanship, but by no means inferior in general effect, which are to be found in England, in Holland, in Italy and in Spain, in such as the Delft tiles and those of Perugia and Trajana, crudely but freely drawn, with a separate pattern on each tile, there are few to be found in France. Village industries have succumbed before the accomplished products of large manufactories. Such tiles are appreciated as quaint, as naïve, as mediæval and as curiosities, but are not considered as more than expressing the past or an uneducated period of art, which is hardly worthy of imitation. Imitative work, excepting in the reproduction of antiques, is not sympathetic to the French designer, who is constantly endeavoring to produce novel effects, often at the expense of failure in the results.

Occasionally, however, there is to be found a type of work which, while individual in its detail, produces a similar effect to the encaustic tile of Italy or of Spain.

The use of tile, either of the usual type or of sharp

fire clay, upon the exterior of buildings in large surfaces is increasing in France as it is in Germany. There is a certain amount of Renaissance of color decoration upon façades. It is doubtful if large set scenes, so to speak, of tile will ever be popular; they are too spectacular, too theatrical in effect, but in zones, in friezes, in spandrels and tympana, around the jambs of windows and doors, in panels in the walls, tile

surfaces are wonderfully effective, adding an element of imperishable color which gives additional charm to form. There already exist admirable precedents for work of this character in Oriental architecture. One has only to see the walls of the houses of Damascus and of Broussa, the minarets and doorways of Tangiers and Tetuan, to realize the superb possibilities of the exterior use of tile; and it is to be noted that these are great sheets of color confined by borders, that they are not pictorial, but are purely coloristic, and that they have long ago solved the question, if question it ever has been, of how to use tile. The method of attack in tile de-



WALL TREATMENT IN ENAMEL TILES.

signing needs no further elucidation than is apparent in these buildings, it is in the details alone that novelty need be attained. There is no reason why Occidental art should not employ tile equally well as has Oriental art, but it should not neglect or deny the lesson already taught.

The illustrations chosen for this paper are representative of the more decorative uses to which enameled tiles are put by the French. No attempt has been made, because it seems unnecessary, to show what might be termed regulation tile work, which exists in great abundance and in nearly every form of private and public building.



Editorial Comment and Selected Miscellany

SOMETHING NEW IN STRIKES.

A CASE of rather unusual interest is now being tried before the Supreme Court of Massachusetts. The Norcross Brothers Company, who were building the Harvard Medical Schools at Longwood, near Boston, had, as a part of their contract work, to build a number of flat interior arches of brick ground to fit the form of the arch. This grinding they were proposing to have done at their yard, where they had special machinery for the purpose. But the Bricklayers' Union, hearing of this, entered a protest, claiming that the work of grinding these bricks must be done at the building by the bricklayers, and that the Union laborers would decline to set any brick ground away from the premises.



FOUNTAIN IN HOTEL CORRIDOR.

Executed in Architectural Faience by Rookwood Pottery Company.

The builders thereupon did the grinding and set the bricks together at the yard to form a solid lintel, which they then told the bricklayers to set in place at the building. Whereupon the Union replied by striking upon all of the Norcross work. An injunction was then applied for to the Supreme Court, and it is on this injunction that the argument is now being held.

This is by no means a new question, as it comes up in one form or another nearly every year, and the fundamental principle involved is the recognition or refusal of the right of the union to dictate as to how the work shall be carried on. There is no doubt in the mind of nearly every candid person that the ultimate result of the labor agitations will be for the improvement of the individual and consequently the bettering of the laboring classes as a whole. On the other hand, the most ardent advocate of the union principle can hardly



A MANUFACTURING BUILDING, CHICAGO.

Howard Shaw, Architect.

deny that of late years those having the direction of the union in their hands have at times grossly abused their power, and have done much harm to their own interests and to the community. The fact that good will, in the long run, come out of questionable methods certainly does not excuse the policy which has been so often followed, and it is greatly to be regretted that men of the



A SMALL BLOCK, CLEVELAND, OHIO.

William R. Watterson, Architect.

stamp of Mitchell for the miners or Arthur for the steam engineers have not yet arisen to take a directing hand in the affairs of the building trades' councils.

It may seem a bit Utopian, but we believe the time is coming when labor will be so thoroughly organized that the present system of contracting will be entirely changed. Contracts for labor will be made directly with the labor organizations, and they will have the moral power to compel the faithful obligations

of contracts, both as to amount of work and of implied contracts as to quality. The so-called walking delegate, who has wrought so much harm both to the contractors and to the workmen, will cease to exist, because there will be no further need of his services. Labor will be a



THE NEW YORK. THE BESSEMER. POWER BUILDING.

Three new buildings erected in Pittsburgh for Henry Phipps, Esq. Grosvenor Atterbury, Architect for two at left. All fireproofed throughout with Standard System, National Fireproofing Company, Makers.

rights and limitations.

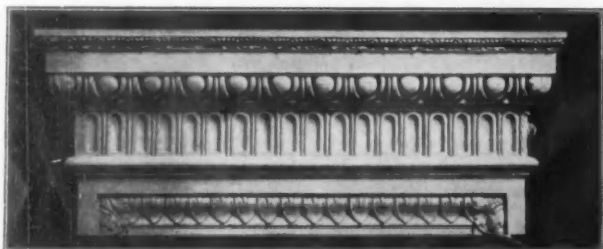
The early fights of the unions were for a decent wage and a reduction in unreasonable hours of labor. The necessity for such contests has practically gone by. The fight now is, after all, in its essence, one for recognition of the union. Whether it deserves to win in individual cases or not depends upon whether the contentions are fair or otherwise.

In this particular case to which we have referred, the position of the unions

is entirely wrong. If carried to its logical conclusion it puts a premium upon poor bungling workmanship, and sets skilled labor at a discount.

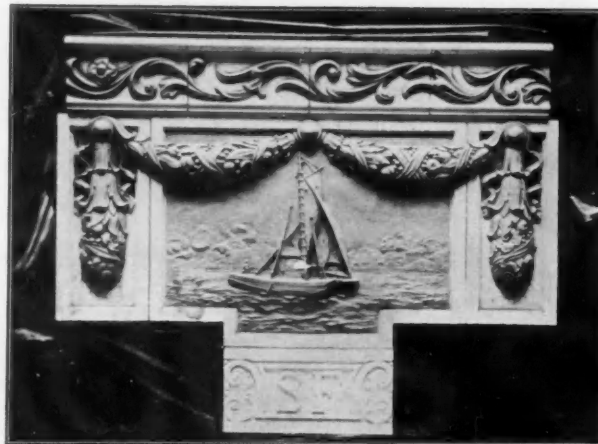
CUTTING DOWN THE COST.

A VERY common experience with every ambitious architect is that after having expended perhaps months of thought and study upon a design and having worked his personality, as it were, into the preliminary studies,



DETAIL BY CLINTON & RUSSELL, ARCHITECTS.
Standard Terra Cotta Company, Makers.

unit, and we cannot think so poorly of humanity as to believe that that unit will be measured by the stature of such men as Sam Parks, or that the mechanics themselves will be so blind to their own interests as to permit bad or indifferent workmen to set the pace for the whole, as is unfortunately so frequently the case now. Furthermore, the most inexcusable feature of present trade unionism, namely, lack of good faith in keeping contracts, is bound to be remedied in proportion as the workmen themselves are educated to more fairly appreciate their



DETAIL OF FAIENCE PANELS AND FRIEZE FOR SOUTH
FERRY STATION OF NEW YORK SUBWAY.

Heins & La Farge, Architects. Panels executed in dull finish colors, greens, yellows and brown. Frieze in solid red glaze, with white blossom. Made by the Hartford Faience Company, Hartford, Conn.



DETAIL BY MCKIM, MEAD & WHITE, ARCHITECTS.
Atlantic Terra Cotta Company, Makers.

he finds that for reasons of business economy he is obliged to cut his creation down to the quick and throw away as it seems all the results of his earnest, intelligent study. There is only one compensation for this condition: the resulting building is sometimes far better for the pruning process. No building can be successful



GATE AND LODGE. Jarvis Hunt, Architect.
Roofed with Ludowici Shingle Tile.

which fails to meet practical requirements. Art which is not backed up by common sense can be classed as nothing but a failure, and in the conscientious attempt to give the best study to an architectural design it is not impossible that practical considerations might be ignored to



DETAIL BY WELCH, SMITH & PROVOT, ARCHITECTS.
Brick, Terra Cotta and Tile Company, Makers.

such an extent as to nullify the results of artistic study. We would not say that every building which is cut down is the better for it, but simplicity is often the determining cause in really good art, and it need not be always considered a hardship if the architect is obliged to cast aside some considerations of pure art on account of cost.



DETAIL BY U. J. L. PEOPLES, ARCHITECT.
Conkling-Armstrong Terra Cotta Company, Makers.

BUILDING OPERATIONS FOR SEPTEMBER.
THE strong building movement of last month continues with little if any abatement, as appears from

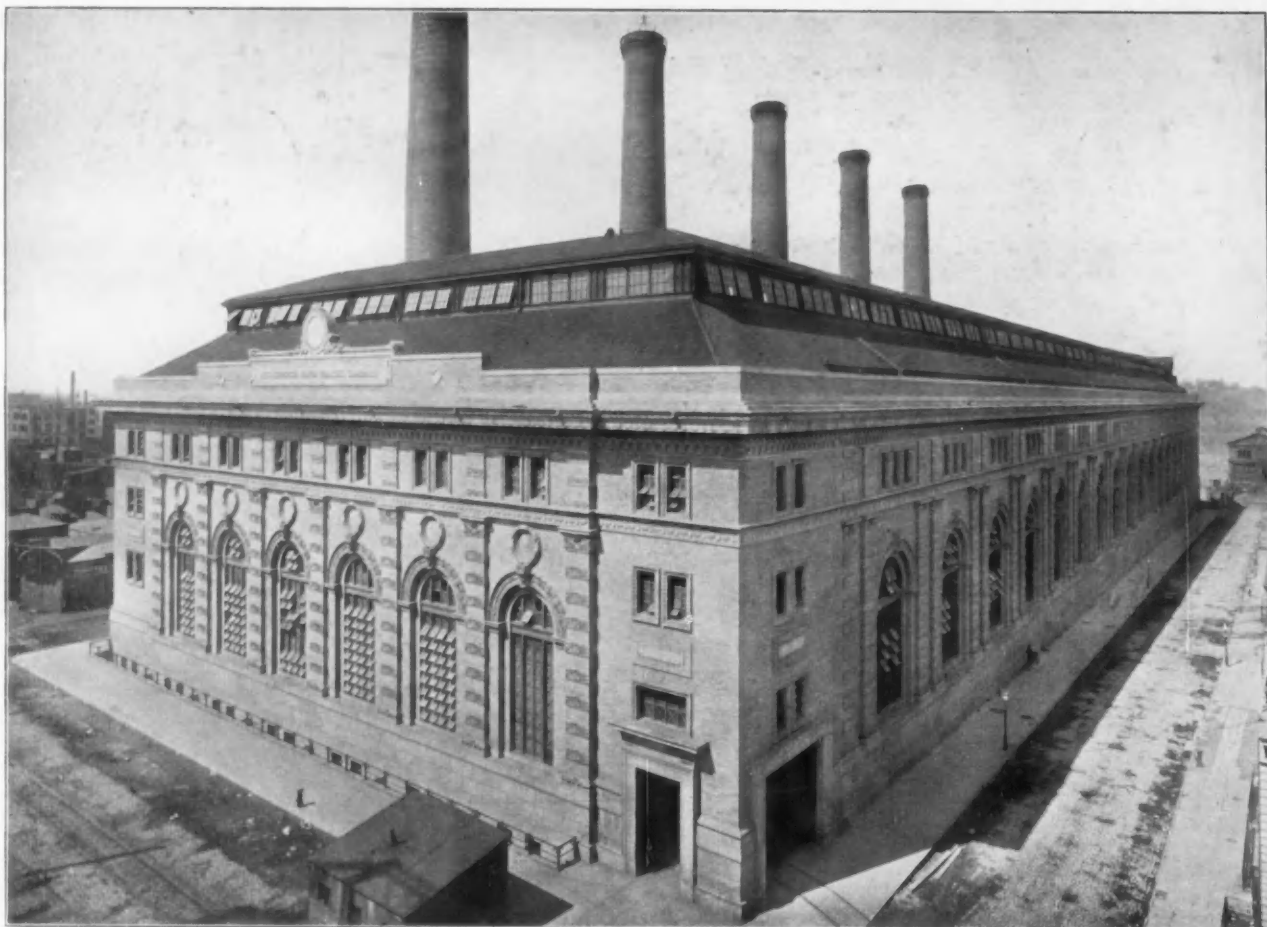


DETAIL BY ERNEST FLAGG, ARCHITECT.
Excelsior Terra Cotta Company, Makers.

reports received by *The American Contractor*, New York, from the leading cities of the country, showing the building permits issued during September as compared with the corresponding month of last year. The gains shown are general, decidedly large and so distributed as to show that the impetus to building operations is not due to local causes. In Greater New York the gain is 85 per cent as against 100 per cent in August. This is really a most gratifying showing, since with winter near at hand, when operations are conducted with greater difficulty, a doubling of last year's figures could scarcely



DETAIL, AUDRY & BENDERNAGLE, ARCHITECTS.
Northwestern Terra Cotta Company, Makers.



NEW INTERBOROUGH POWER HOUSE, NEW YORK CITY.

(The largest power house in the world.)

Built inside and out of brick made by Sayre & Fisher Company.

be expected. Permits aggregating more than twenty-one millions at the beginning of autumn is a remarkable and most promising showing. Chicago reports \$7,349,150, a gain of 31 per cent, as against 80 per cent last month, but even this gain is remarkable when the season of the year is taken into account. The following figures express the percentage of gain of the cities that make the best showing: Allegheny, 111; Buffalo, 140; Cleveland, 66; Dallas, 84; Detroit, 93; Duluth, 110; Harrisburg, Pa., 158; Kansas City, 63; Louisville, 73; Milwaukee, 112; Mobile, 172; Nashville, 133; Newark, 232; New Orleans, 54; Philadelphia, 44; St. Paul, 102; Syracuse, 237; Wilmington, Del., 296. It thus appears that the present building prosperity is widely, almost universally distributed. The losses are few, and, with the exception of Pittsburg, are

confined to the smaller cities. In September, 1904, a single permit of \$3,500,000 was issued in Pittsburg.

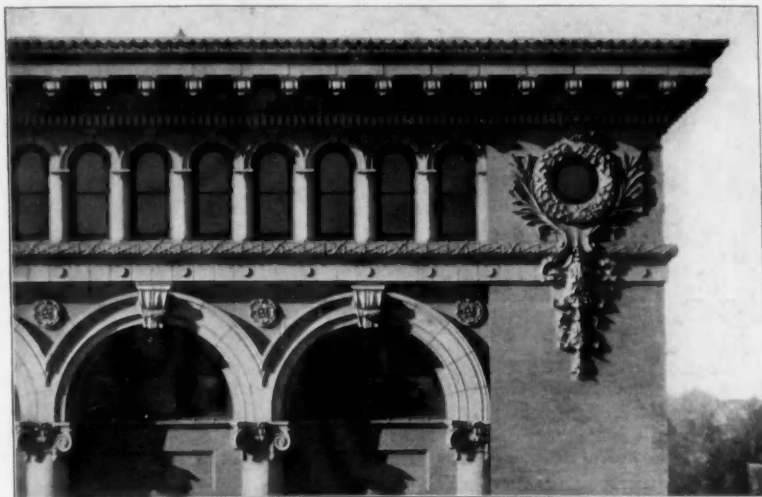
INTERBOROUGH POWER HOUSE.

THIS building occupies an entire block bounded by 58th and 59th streets and 11th and 12th avenues, New York City. It is the largest power house in the world. The fronts of the building required 750,000 brick, dark gray Normans. In the interior there were used 600,000 buff brick and about 300,000 enameled brick of cream and brown shades.

All the bricks employed in the building were furnished by Sayre & Fisher Company, including also the radial brick which were used in the chimneys. These chimneys were erected by the A. Custodis Chimney Company of New York City.



DETAIL BY ATLANTIC TERRA COTTA COMPANY.



DETAIL OF CORNICE, CREAM OF WHEAT BUILDING, MINNEAPOLIS.
Harry W. Jones, Architect.
Terra Cotta made by American Terra Cotta and Ceramic Company.



DETAIL BY NEW JERSEY TERRA COTTA
COMPANY.

American Trust and Savings Bank, Chicago, Jarvis Hunt, architect; The United Engineers' Club, New York City, Hale & Morse, architects; a large building for the Merchants' Refrigerating Company, New York City, William H. Birkmire, architect.

IN GENERAL.

The large warehouse (known as the Ingram Warehouses), illustrated on page 196 of *THE BRICKBUILDER* for September, was the work of Ellicott & Emmart, architects, of Baltimore, and not Wyatt & Nolting, as stated.

Andrew P. Cooper, architect, Uniontown, Pa., has opened a branch office in the First National Bank Building at Connellsville, Pa. Manufacturers' catalogues and samples are desired.



HOTEL JERMYN, NEW YORK CITY.
Mulliken & Moeller, Architects.
Terra Cotta by New York Architectural
Terra Cotta Company.

pany; Guaranty & Trust Building, Broadway, New York City, Howells & Stokes, architects; the new Courthouse at Greensburg, Pa., William Kaufman, architect; The

The following new buildings will be fireproofed with the Standard system of fireproofing, manufactured by the National Fireproofing Com-

WANTED—A good architectural draughtsman can secure permanent employment. Send references and sample of work to Shand & Lafaye, 1328 Main Street, Columbia, S. C.

WANTED—A competent architectural draughtsman. Apply to D. A. Bohlen, Architect, Indianapolis, Ind.

WANTED—To handle account of some good corporation doing business with architects, engineers and contractors, on either a salary or commission basis. Extensive acquaintance west of Missouri River, including California and the Northwest. Present location Denver, Col. Best of references. Correspondence solicited. Address "Salesman," care of "The Brickbuilder."

Architectural Faience. Competition B.

Subject: *A Large Mantel with Hood.*

ONE CASH PRIZE ONLY. FIFTY DOLLARS FOR BEST DESIGN. ALSO MENTIONS.

Competition closes December 1, 1905.

PROGRAMME.

At the end of a large hall, such as would occur in a clubhouse or in the main lobby or dining-room of a hotel, it is desired to place a large mantel with a hood, similar in style to that of the period of Francis I of France. This mantel should be designed to be executed in Architectural Faience in one or more colors.

The color scheme may be indicated by a key.

The mantel is to occupy a wall space of not more than 150 square feet.

Drawings required. Plan and elevation at a scale of one-half inch to the foot.

Drawings may be rendered at will on a sheet of unmounted white paper, measuring 16 inches by 20 inches.

Each drawing is to be signed by a *nom de plume* or device, and accompanying same is to be a sealed envelope with a *nom de plume* on the exterior and containing the true name and address of the contestant.

The drawing is to be delivered at the office of THE BRICKBUILDER, 85 Water Street, Boston, Mass., charges prepaid, on or before December 1, 1905.

The prize drawing is to become the property of THE BRICKBUILDER, and the right is reserved to publish or exhibit any or all of the others. Those who wish their drawings returned may have them by enclosing in the sealed envelopes containing their names five cents in stamps.

The designs will be judged by a well-known member of the architectural profession.

Competition open to every one.

Competition for an Office Building

First Prize, \$500 Second Prize, \$200 Third Prize, \$100

COMPETITION CLOSSES DECEMBER 23, 1905

PROGRAMME



HE problem is an Office Building. The location may be assumed in any city of the United States. The site is at the corner of two streets of equal importance. The lot itself is perfectly level. The size of building is 80 feet square on the ground and 120 feet high. Number of stories left to the designer.

Above a base course of granite (not over 2 feet high) the exterior of the building is to be designed entirely in Architectural Terra Cotta.

For the reason that colored terra cotta is likely to be used extensively in the facades of buildings, it is desired that a color scheme shall be indicated either by a key or a series of notes, printed in the lower right-hand corner of the sheet of details at a size which will permit of two-thirds reduction.

The following points must be considered in the design:

- A. Frank and logical expression of the prescribed material.
- B. Rational and logical treatment of the architectural problem.

In awarding the prizes the intelligence shown in the constructive use of terra cotta and the development or modification of style, by reason of the material, will be taken largely into consideration.

It must be borne in mind that one of the chief objects of this competition is to encourage the study of the use of architectural terra cotta. There is no limitation of cost, but the designs must be suitable for the character of the building and for the material in which it is to be executed.

The details should indicate in a general manner the jointing of the terra cotta and the sizes of the blocks.

Drawings Required

On one sheet the front elevation drawn at a scale of 4 feet to the inch, and on the same sheet the perpendicular section of the front wall.

On a second sheet, half-inch scale elevations and sections of main entrance and any other portions of the building necessary to interpret the design, including a portion of upper stories and main cornice.

In the lower left-hand corner of the second sheet is to be shown the first and typical floor plans at a scale of 16 feet to the inch. The first floor plan may provide offices for a bank or insurance company. The main entrance corridor and location of the elevators should also be shown.

The size of each sheet (there are to be but two) shall be 24 inches by 36 inches.

The sheets are not to be mounted.

All drawings are to be in black ink without wash or color, except that the walls on the plans and in the sections may be blacked-in or cross-hatched.

Graphic scales to be on all drawings.

Every set of drawings is to be signed by a *nom de plume* or device, and accompanying same is to be a sealed envelope with the *nom de plume* on the exterior and containing the true name and address of the contestant.

The drawings are to be delivered flat at the office of THE BRICKBUILDER, 85 Water Street, Boston, Mass., charges prepaid, on or before December 23, 1905.

The prize drawings are to become the property of THE BRICKBUILDER, and the right is reserved to publish or exhibit any or all of the others. Those who wish their drawings returned may have them by enclosing in the sealed envelopes containing their names ten cents in stamps.

The designs will be judged by three well-known members of the architectural profession.

For the design placed first in this competition there will be given a prize of \$500.

For the design placed second a prize of \$200.

For the design placed third a prize of \$100.

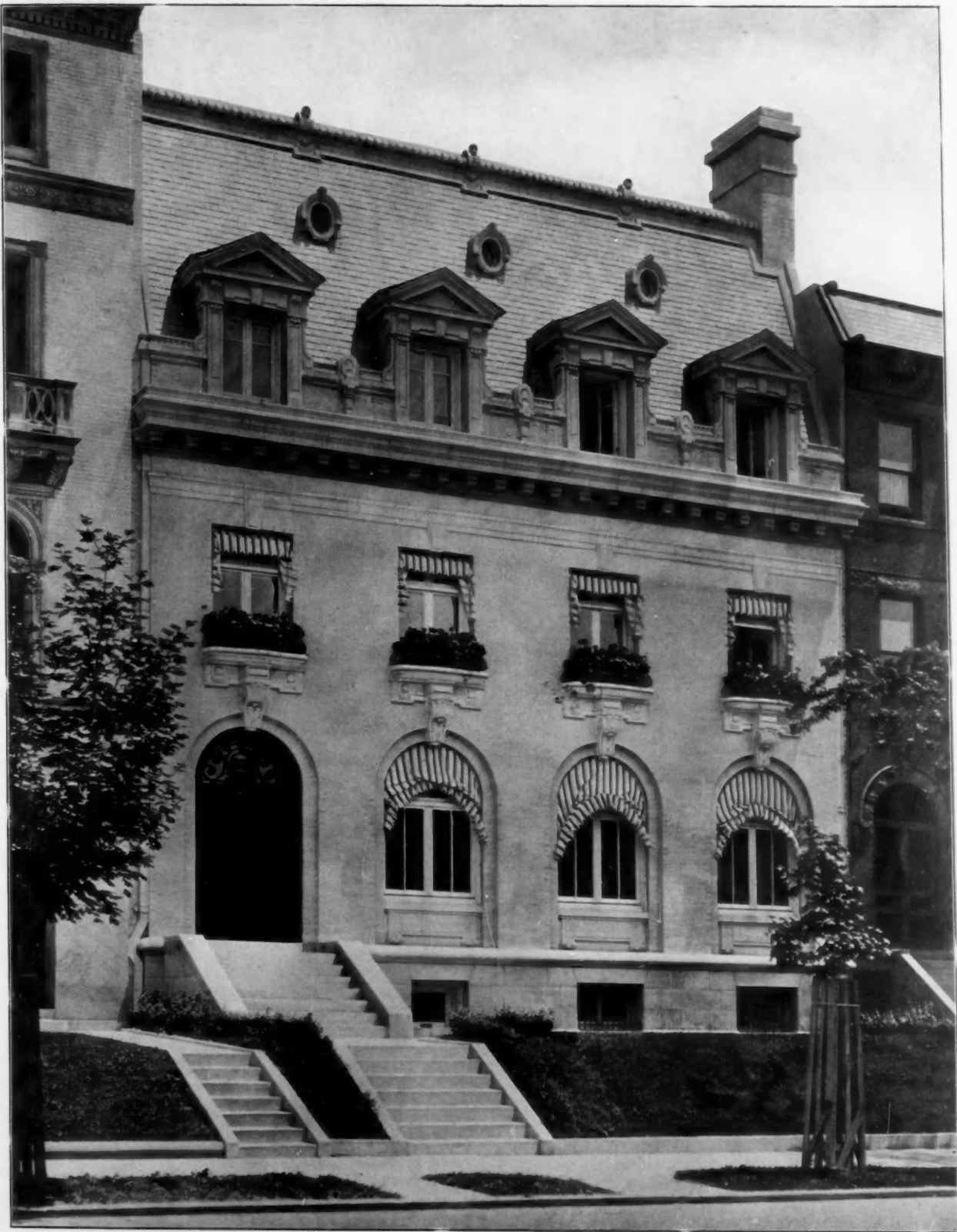
We are enabled to offer prizes of the above-mentioned amounts largely through the liberality of the terra cotta manufacturers who are represented in the advertising columns of THE BRICKBUILDER.

This competition is open to every one.



HOUSE FOR ROBERT PITCAIRN, JR. ESQ., PITTSBURG, PA.
MACCLOURE & SPAHR, ARCHITECTS.





HOUSE, WASHINGTON, D. C.
WYETH & CRESSON, ARCHITECTS.





FRONT OF THE GROUP.



ADMINISTRATION BUILDING THROUGH THE GATEWAY.

J THE WIDENER MEMORIAL INDUSTRIAL TRAINING SCHOOL, LOGAN STATION, PHILADELPHIA.

HORACE TRUMBAUER, ARCHITECT.

THE BRICKBUILDER,
OCTOBER,
1905.





SHOWING SIDE VIEW OF GROUP AND ADMINISTRATION BUILDING.

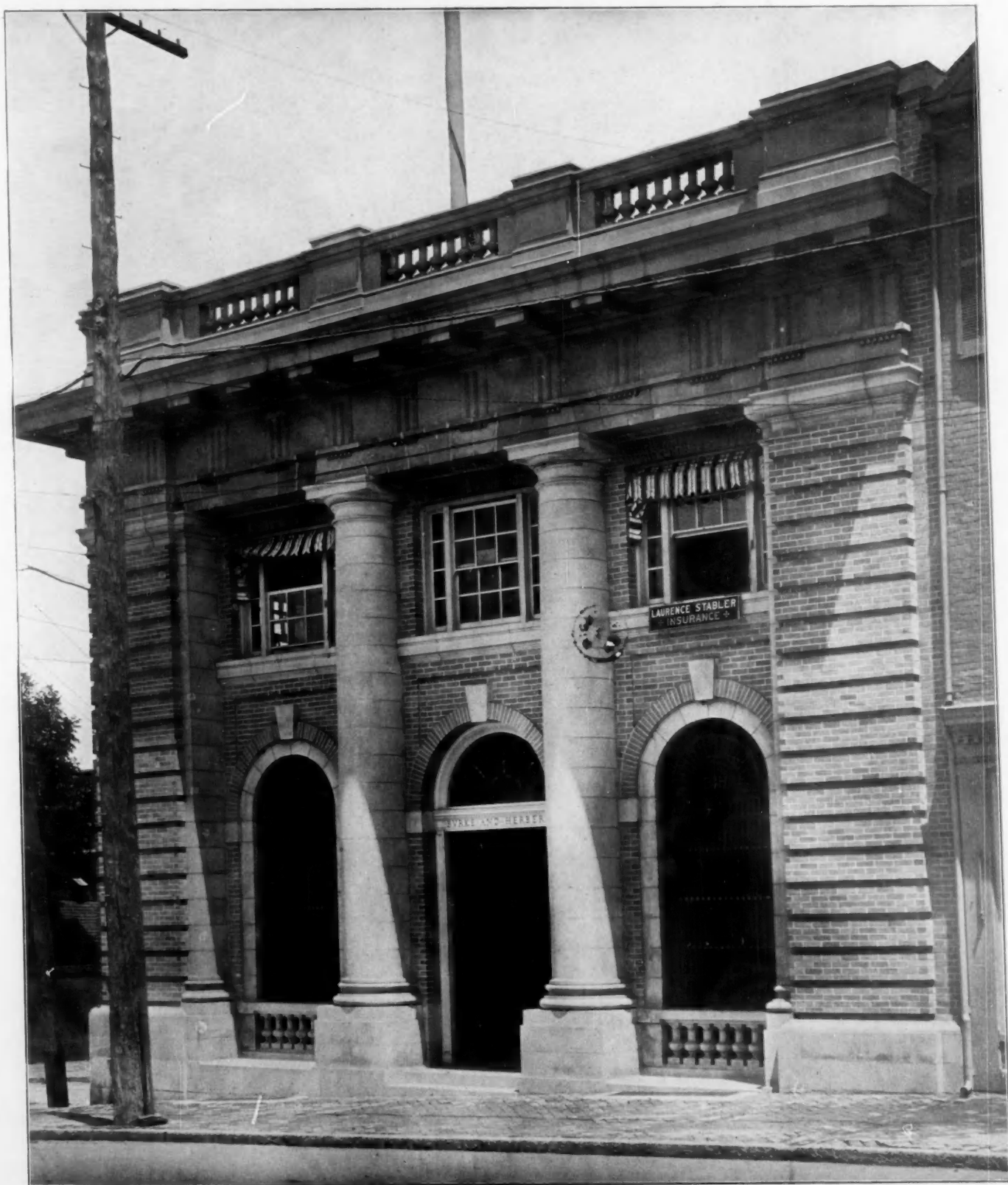


REAR VIEW OF GROUP AND ADMINISTRATION BUILDING.

THE WIDENER MEMORIAL INDUSTRIAL TRAINING SCHOOL, LOGAN STATION PHILADELPHIA.
HORACE TRUMBauer, ARCHITECT.

THE BRICKBUILDER,
OCTOBER,
1905.





BANK BUILDING, ALEXANDRIA, VA.
WOOD, DONN & DEMING, ARCHITECTS.





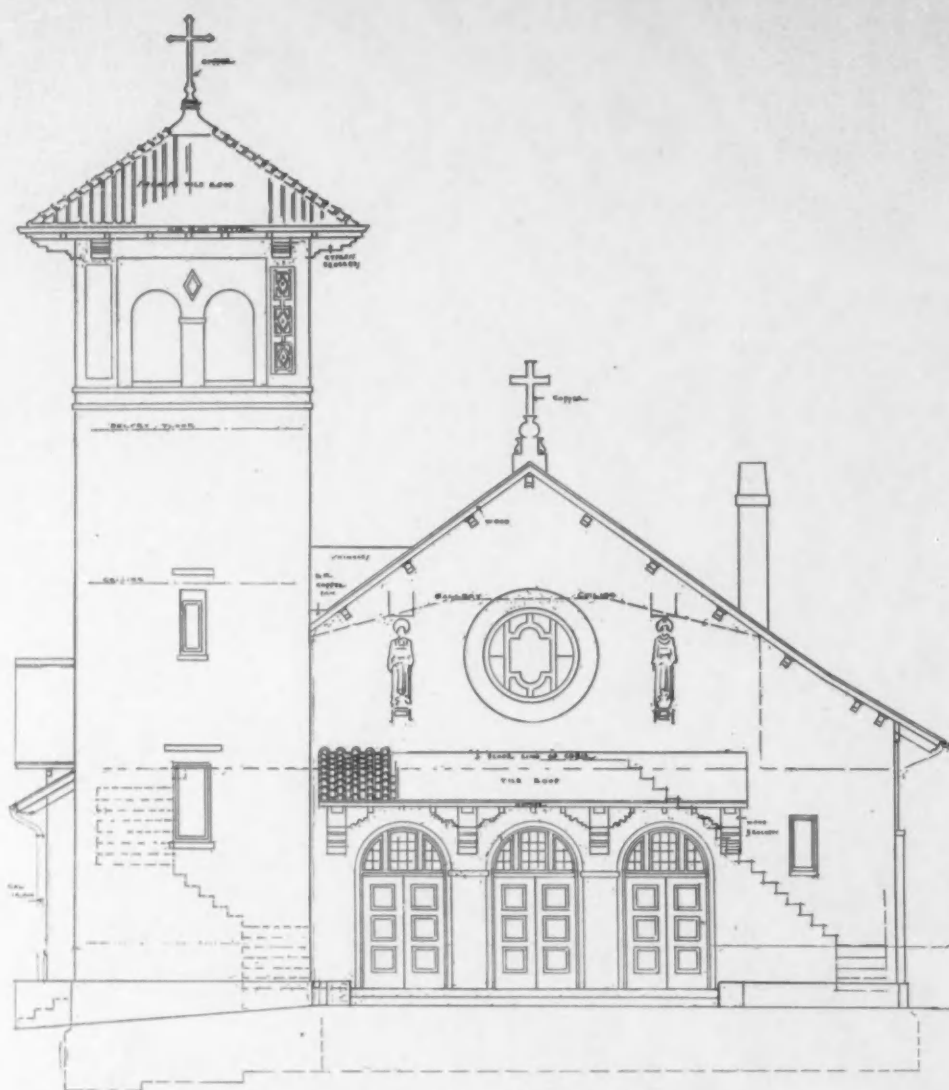
DETAIL OF ADMINISTRATION BUILDING AND RIGHT WING.



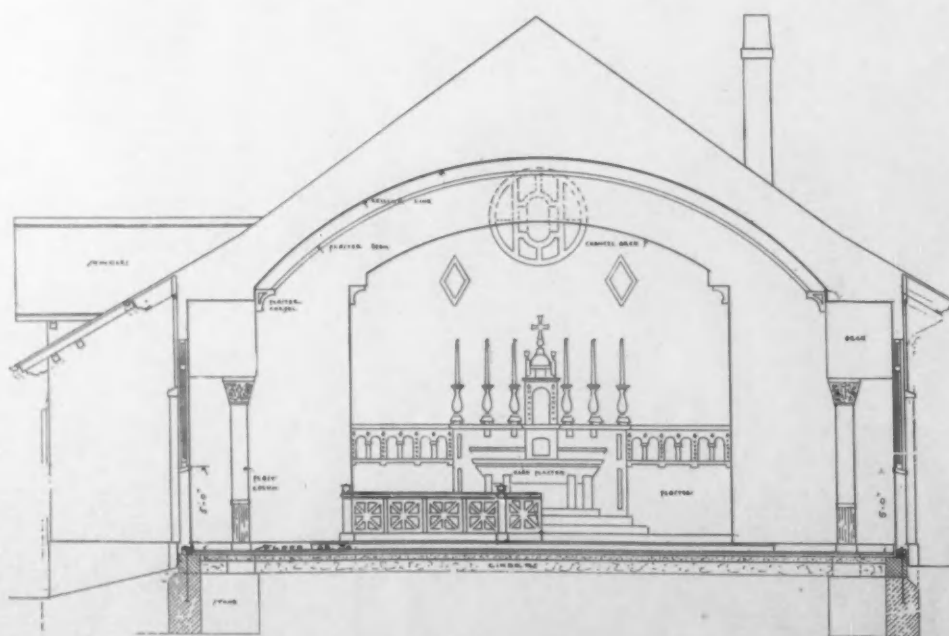
DETAIL OF ADMINISTRATION BUILDING AND LEFT WING.

THE WIDENER MEMORIAL INDUSTRIAL TRAINING SCHOOL, LOGAN STATION, PHILADELPHIA.
HORACE TRUMBAUER, ARCHITECT.

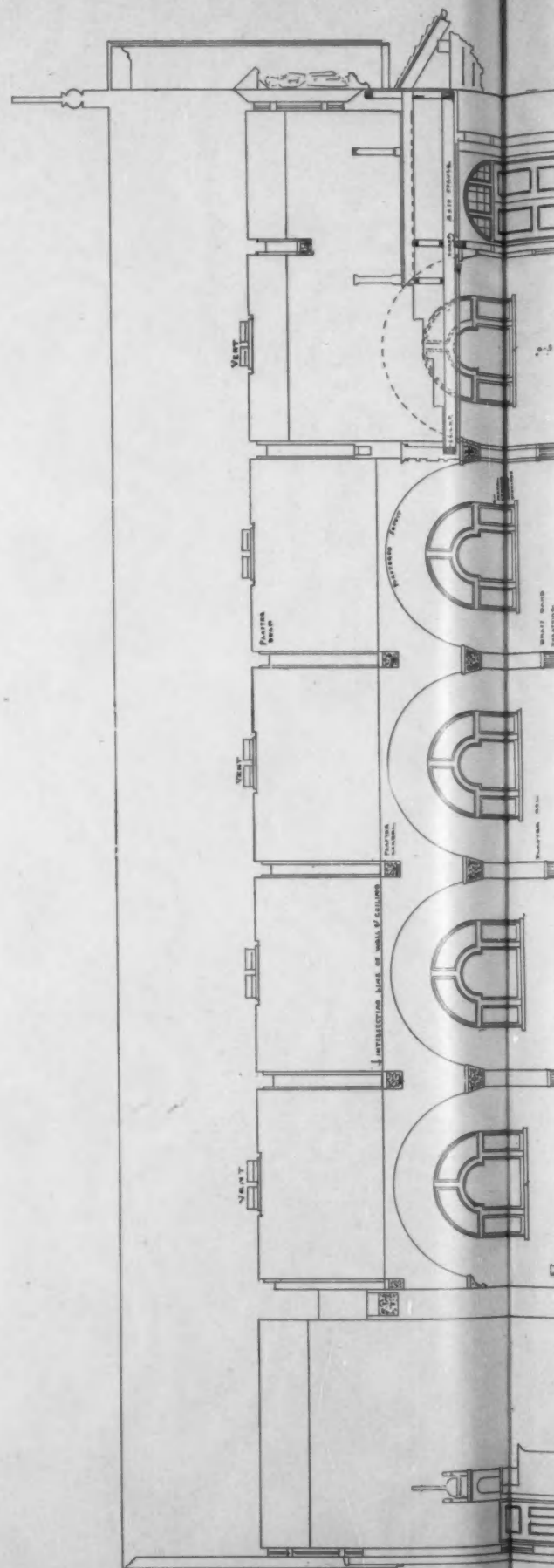
THE BRICKBUILDER,
OCTOBER,
1905.



FRONT ELEVATION

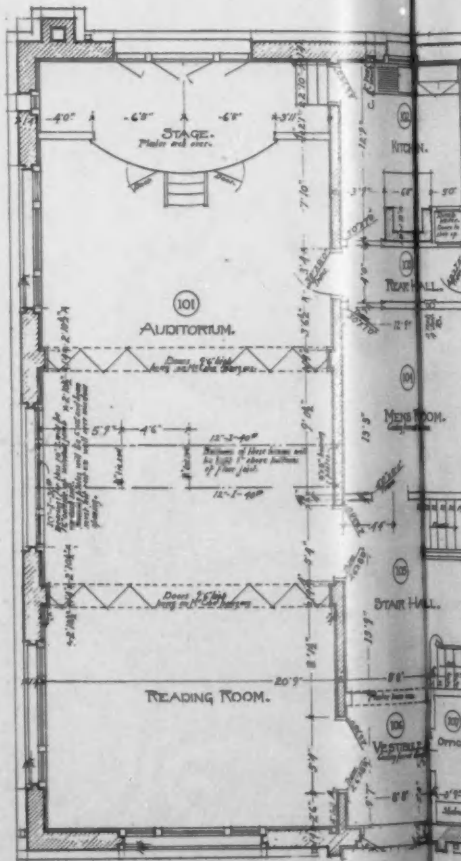
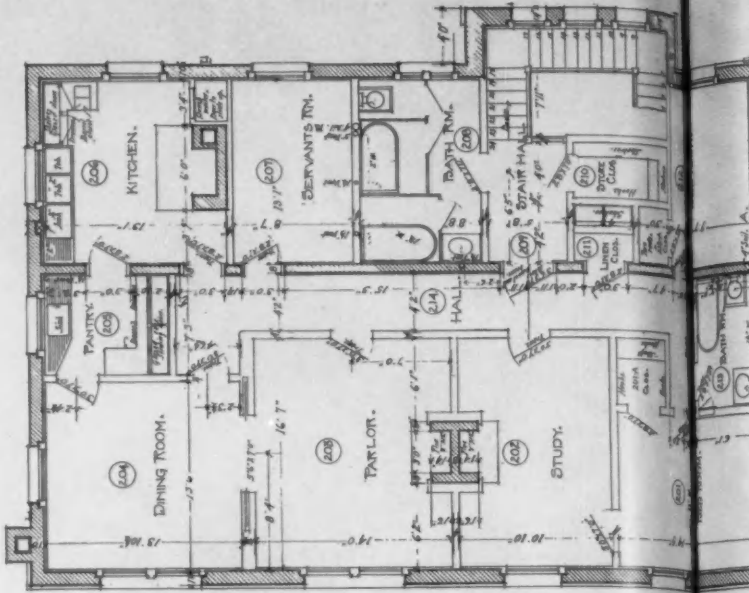
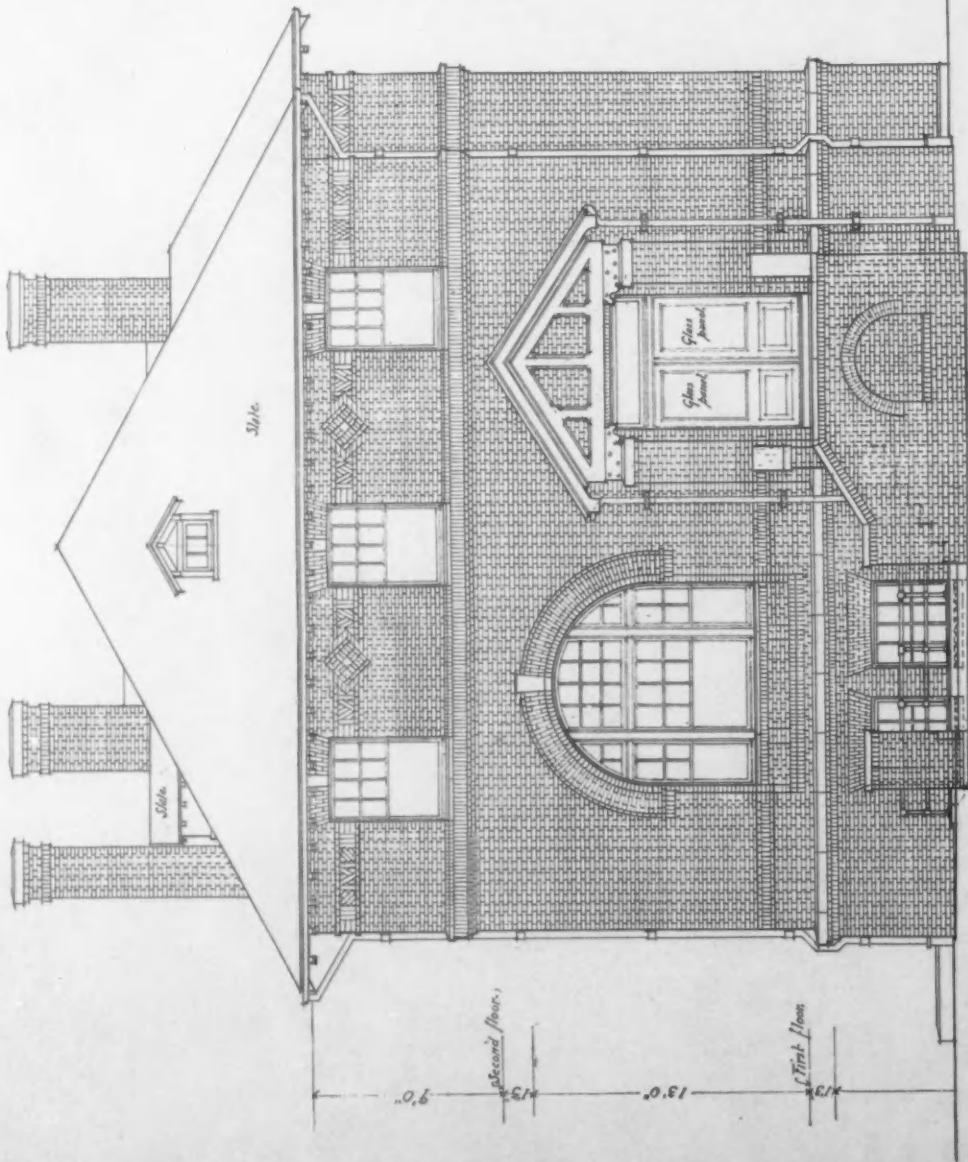
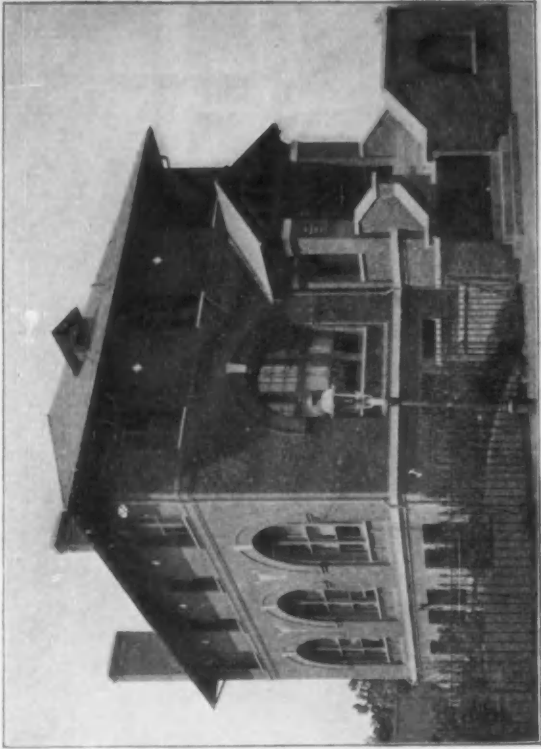


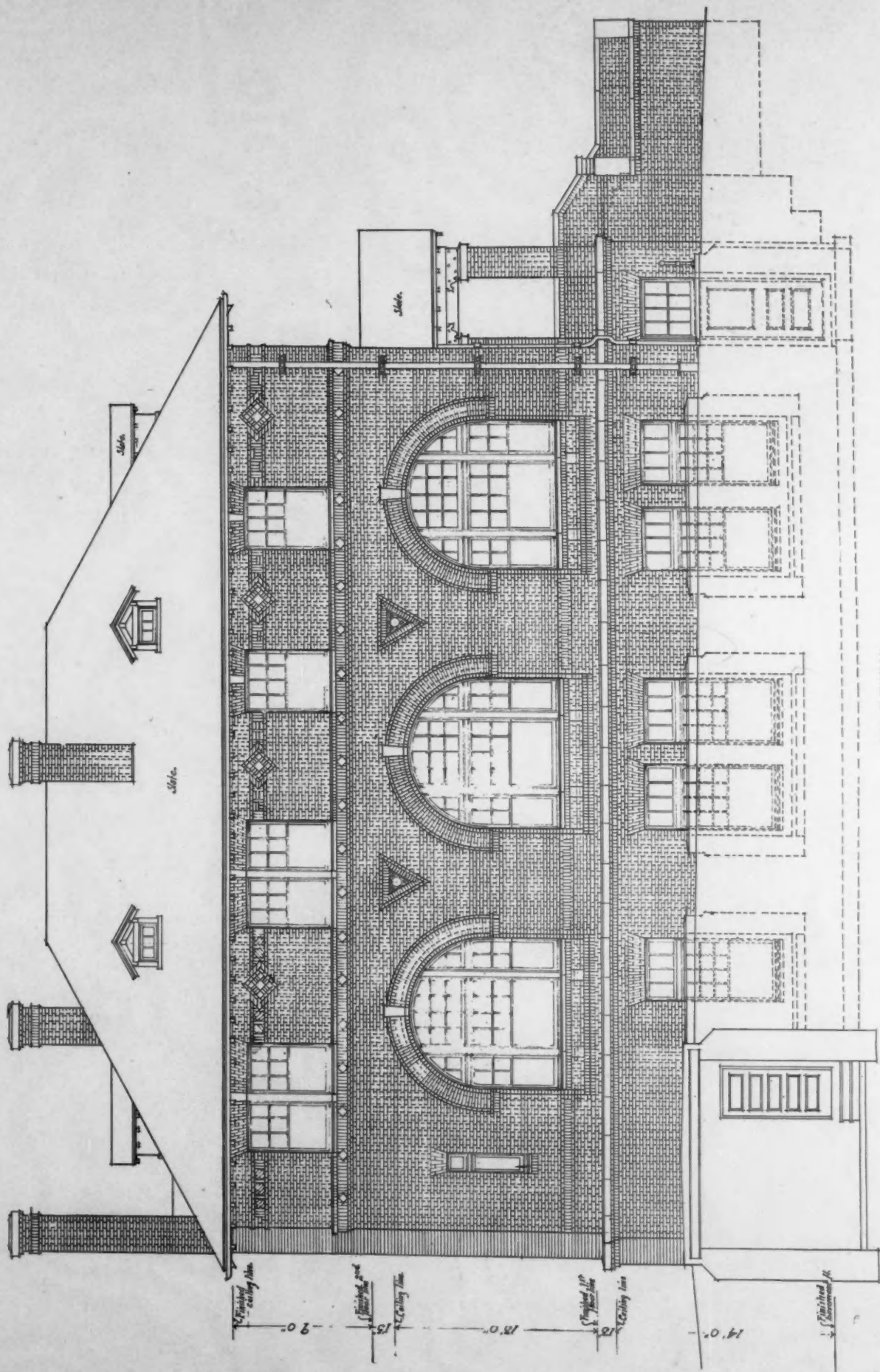
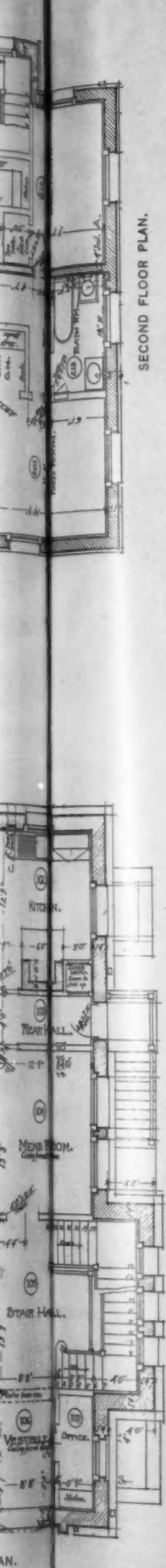
TRANSVERSE SECTION.





CHURCH AT MANCHESTER-BY-THE-SEA, MASS.
SIDE ELEVATION.
MAGINNIS, WALSH & SULLIVAN, ARCHITECTS.



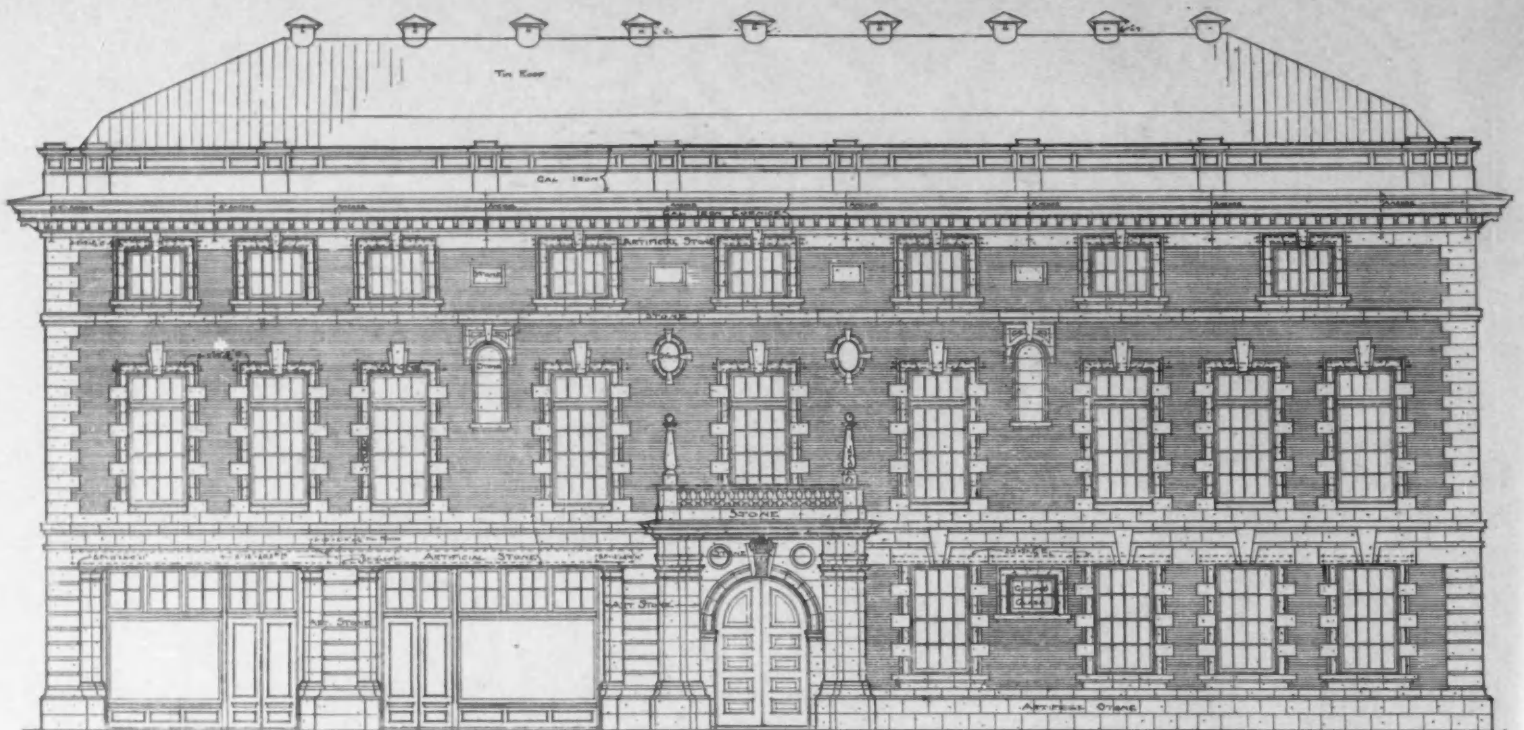


SIDE ELEVATION.
IMMANUEL CHAPEL HOUSE, YONKERS, N. Y.
BUTLER & RODMAN, ARCHITECTS.

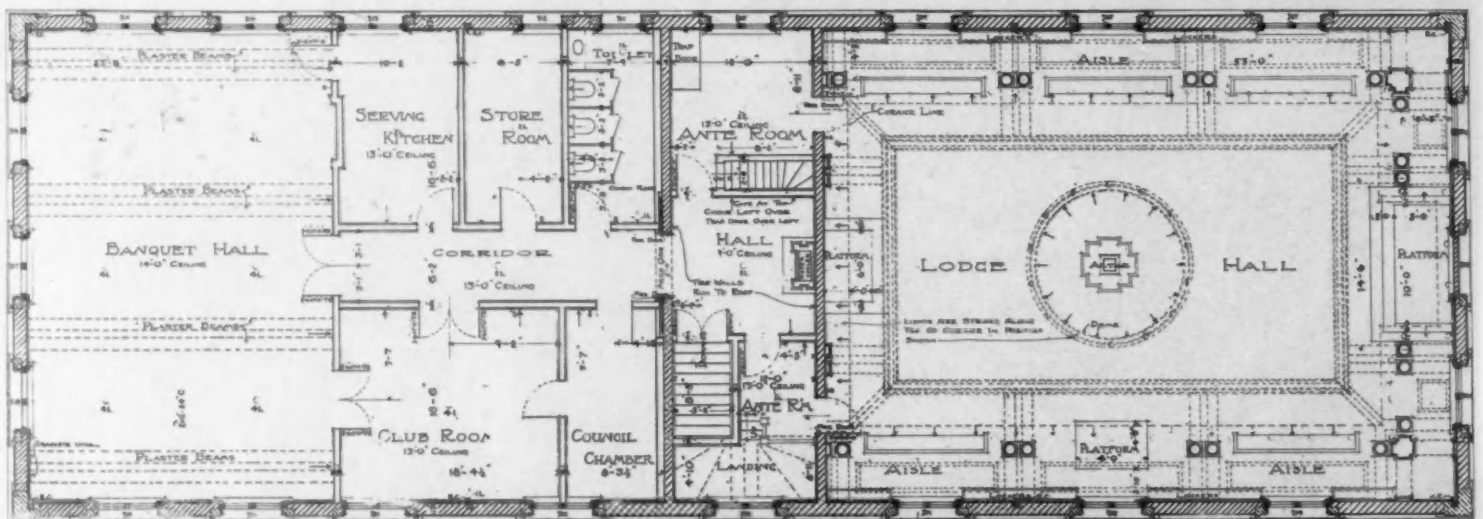
THE BRICKBUILDER.

VOL. 14. NO. 10.

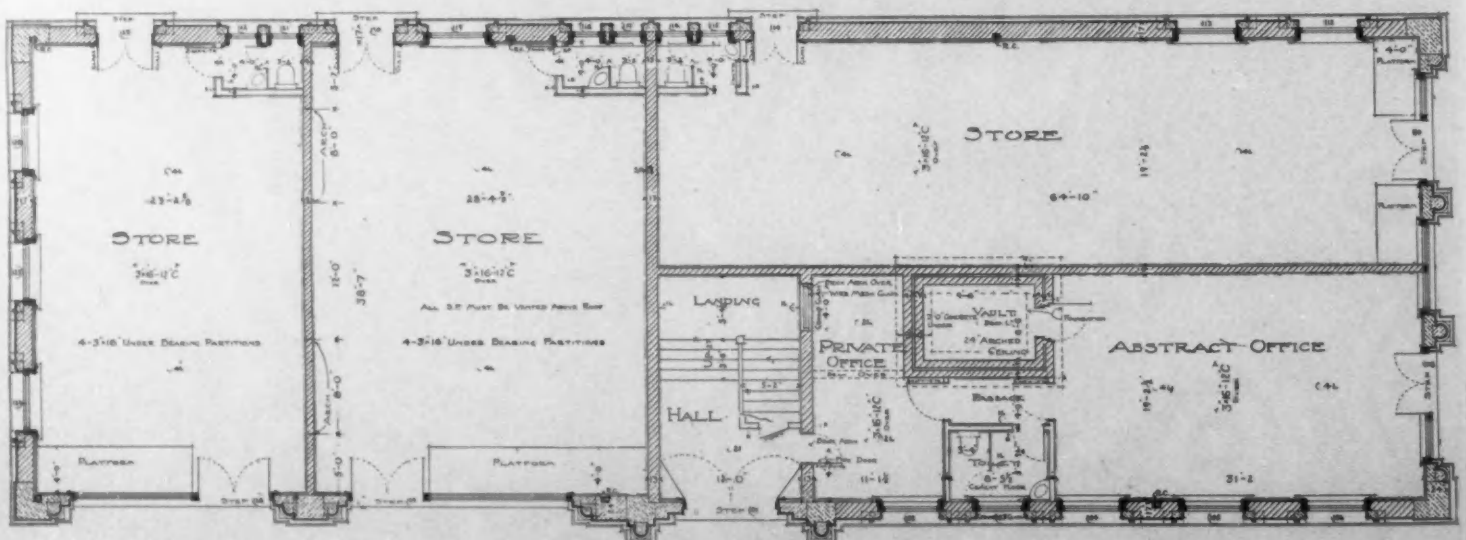
PLATE 77.



FRONT ELEVATION.

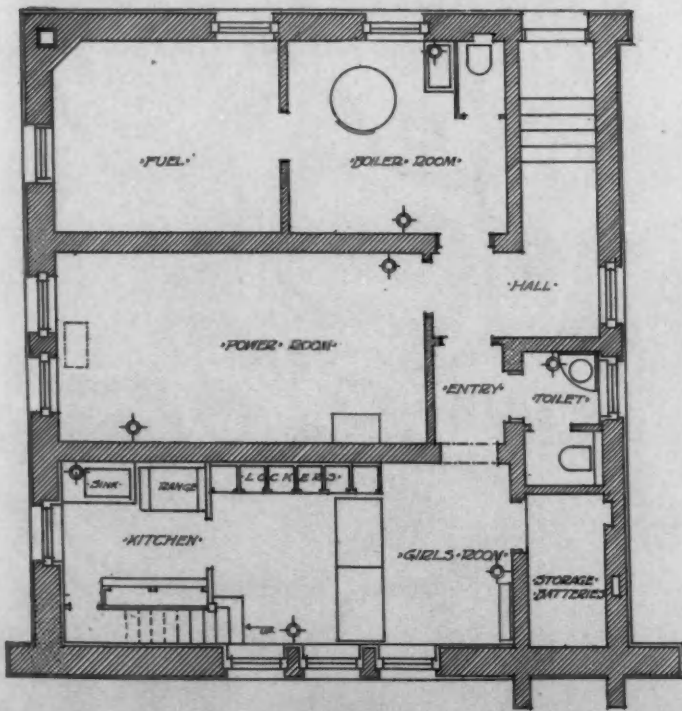
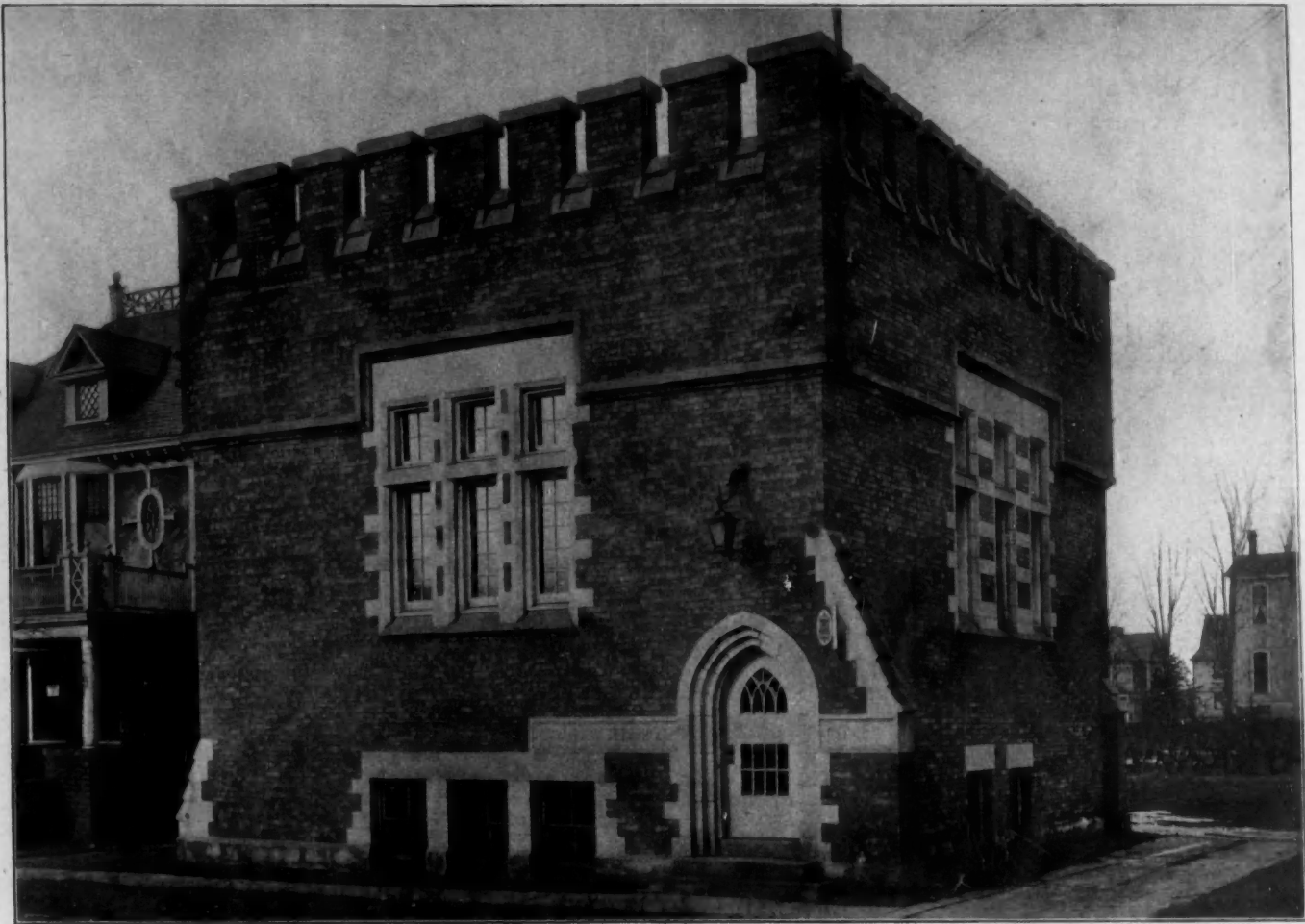


THIRD FLOOR PLAN. (THE SECOND FLOOR IS DIVIDED INTO OFFICE SUITES FOR RENTING.)

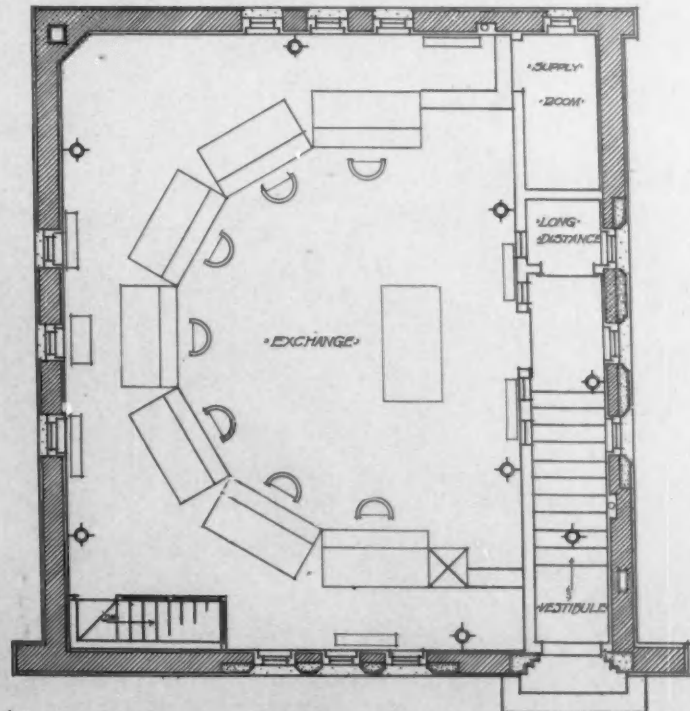


FIRST FLOOR PLAN.

OFFICE AND SOCIETY BUILDING, MIAMI, FLA.
WALTER C. DEGARMO, ARCHITECT.



BASEMENT PLAN.



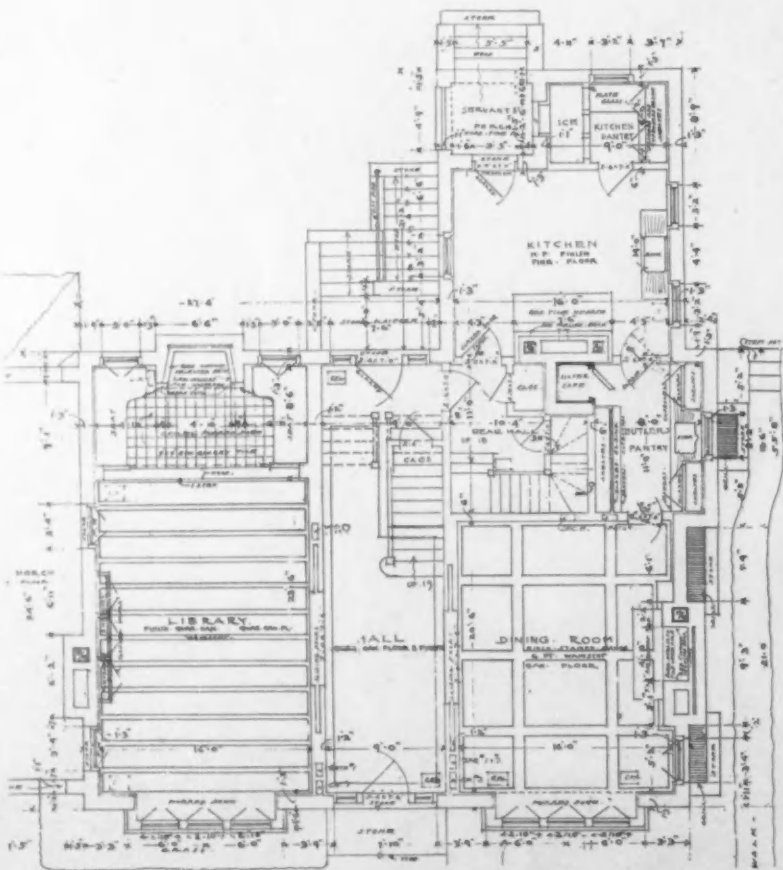
FIRST FLOOR PLAN.

BRANCH TELEPHONE STATION, CLEVELAND, OHIO.

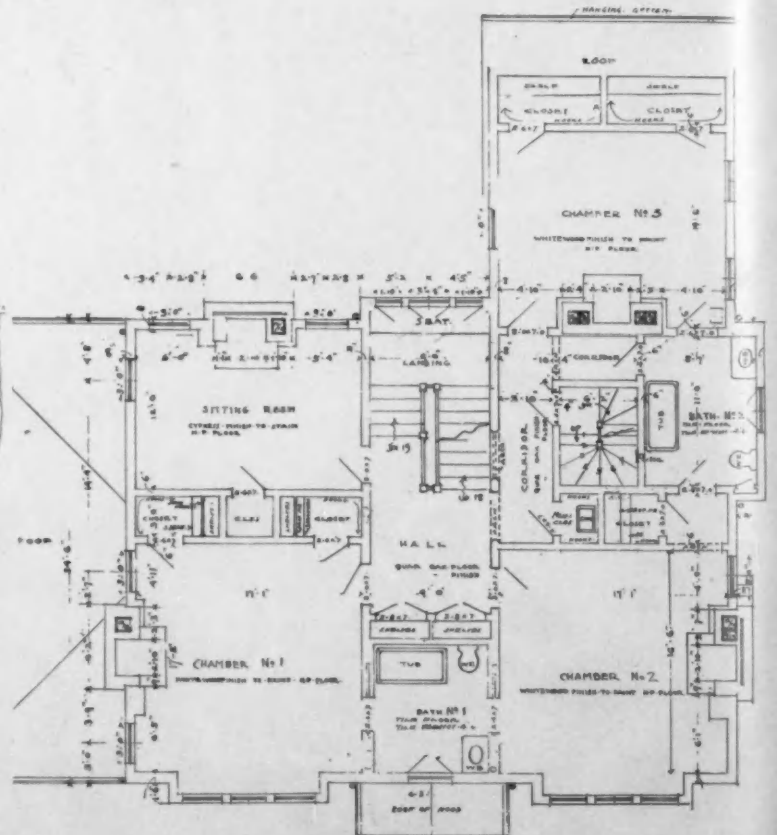
SEARLES, HIRSH & GAVIN, ARCHITECTS.



FRONT ELEVATION.

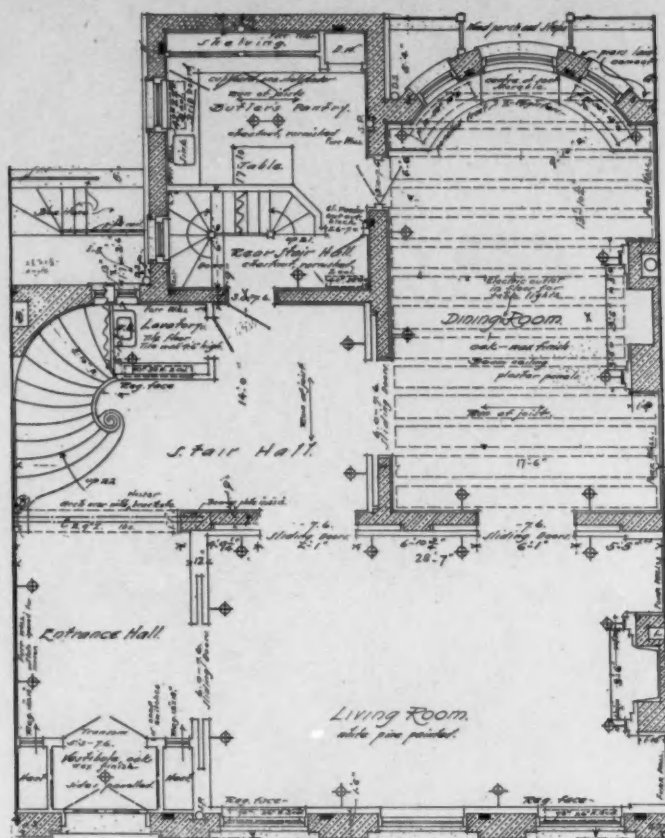


FIRST FLOOR PLAN.

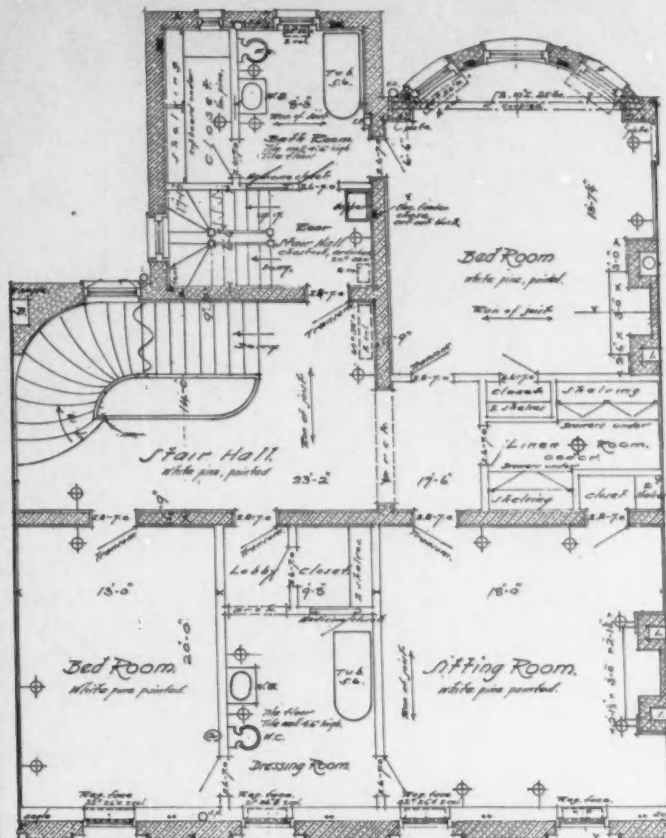


SECOND FLOOR PLAN.

HOUSE FOR ROBERT PITCAIRN, JR., ESQ., PITTSBURG, PA.
MACCLURE & SPAHR, ARCHITECTS.

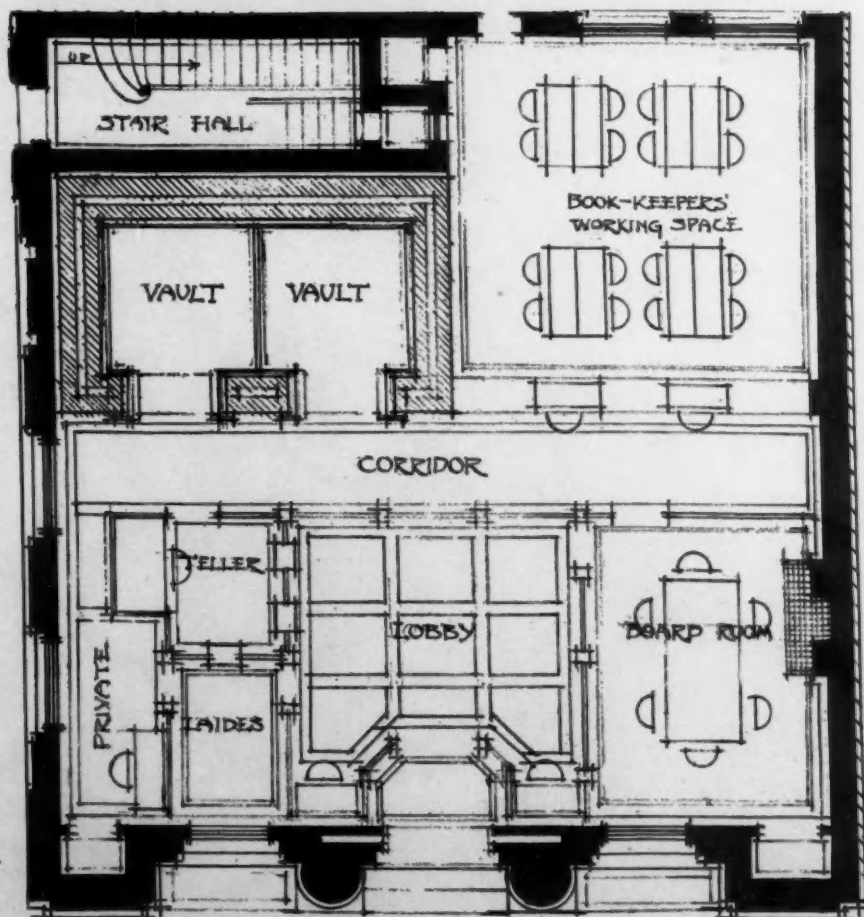


FIRST FLOOR PLAN.



SECOND FLOOR PLAN.

HOUSE AT WASHINGTON, D. C.
WYETH & CRESSON, ARCHITECTS.



FLOOR PLAN.

BANK AT ALEXANDRIA, VA.
WOOD, DONN & DEMING, ARCHITECTS.